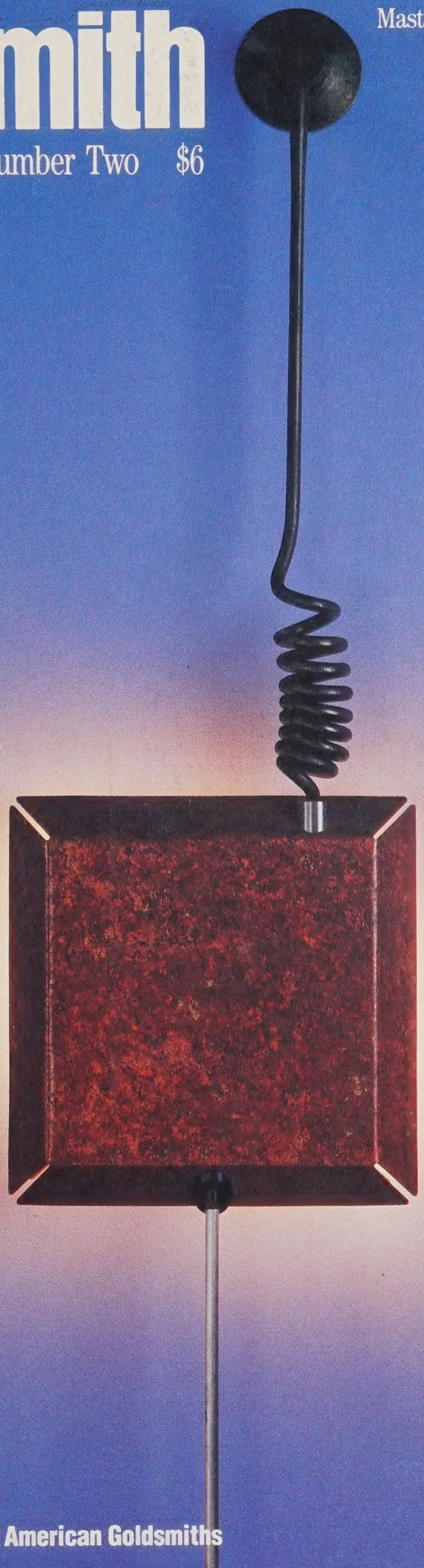
Metalsmith

Spring 86 Volume Six Number Two $6

Master Metalsmiths: Miyé Matsukata
Robert Montgomery
Bi-Metal Casting to Titanium
Metalsmith Summer Programs
Metal Furniture



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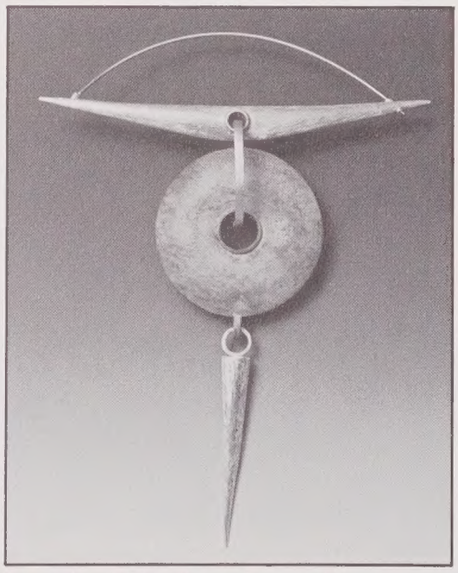

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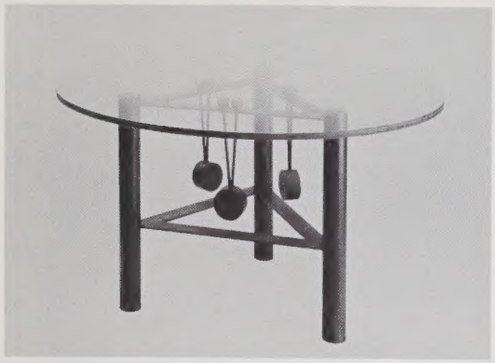

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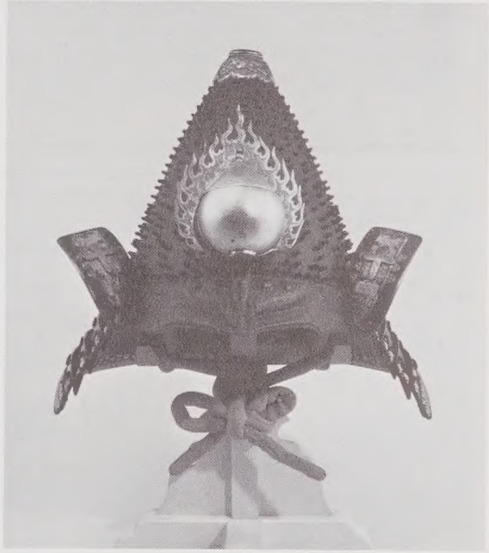

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Cover: Karl Bungerz, *Wall Lamp*,(detail) rusted steel, aluminum, incandescent bulbs, 50" h., 1985. Photo: Keith Proctor. Story begins on page 24

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Editorial

Effective this issue, I am resigning from my involvement with *Metalsmith* magazine. Eleven years of paperwork has taken its toll; I now feel like a "papersmith" instead of a metalsmith.

I can still remember back to the summer of 1975 when the Society of North American Goldsmiths (SNAG) was in shambles. At the Bromwood Conference, called to reorganize and redirect SNAG, it became quite clear that some type of publication must be initiated if the society was to exist. Out of madness and naiveté I volunteered. The 20-hour trip back from St. Louis bore the title of the first newsletter, *Golddust* (an attempt to disseminate the bits, pieces and dust of the member goldsmiths). Over the next few years, the scope of the publication changed and the new title, *Goldsmiths Journal,* reflected that. As the magazine grew, so did the paperwork. I remember the many weekends prior to each bimonthly deadline when normal existence stopped for days and the magazine was lined up page by page, over the floors of the living room, dining room and adjacent hallway. Cats, dogs, kids and coffee cups all had to be fought until each issue was ready for the printer, always behind schedule. In earlier days, I can also remember how my students were forced into "voluntary" labor as the pages came back from the printer and had to be collated, stapled, folded, stapled again, addressed, stamped, zip coded and boxed, all in an afternoon. After five years, it was time to bring in the professionals, and we were fortunate to obtain the services of Sarah Bodine and Marty Moskof. The name was changed and the scope of the magazine broadened again to accommodate all people working in metal. Color began appearing on the covers and now on the inside. What a change 11 years has brought.

I firmly believe that volunteers obtain as many benefits as the services they provide. My life has been enriched beyond belief by the various information, sources, experiences and people with whom I have come in contact because of my involvement with the magazine and society. As with any volunteer organization, there is never a great continuity of people, but their collective efforts insure that their cause continues. Our dedication to our material and its artistic promotion is a worthy cause that all of us must continue to support in one manner or another, even if just as subscribers.

Let me take one last opportunity to thank all of the people who have contributed to the magazine and organization in one form or another. Perhaps we will all meet again in "SNAG Heaven."
—MB

In August of 1975, the first issue of the SNAG newsletter appeared. Its publication was possible only through the selfless volunteer effort of Mark Baldridge, who from a modest start almost single-handedly nurtured this newsletter, until, less than two years later, it became the *Goldsmiths Journal,* a full-fledged, 28-page illustrated periodical. When the *Goldsmiths Journal* became *Metalsmith* in the fall of 1980, Mark continued to contribute his talents, first as coeditor, later as associate editor. The magazine you hold in your hands owes much of its style and flavor to Mark's vision and guidance. We owe Mark Baldridge a great debt for his tireless service over the past 11 years. On behalf of the board of directors and the entire membership, I extend our thanks and admiration for his inspiration, his energy and his devotion.
—Michael Croft, President, Society of North American Goldsmiths

Mark Baldridge has been a willing and able coworker, always ready with a contact, an idea or a kind word. And, although I am sorry to see Mark leave his role with *Metalsmith,* I can understand his need to get back to his own work.

With Mark's resignation also comes good news. As you will notice, in this issue of *Metalsmith,* we are introducing color inside the magazine. With this added dimension, we look to more accurately illustrate the many uses of color in metalsmithing and jewelry. We also announce with pleasure that the *Art Index* now includes *Metalsmith* in its listings. This means that articles, reviews and technical information will be more easily researched through the *Art Index* in your local library. This inclusion is an honor bestowed on select magazines by rigorous review only every 10 years, and we appreciate the vote of confidence.
—SB

Letters

Dear Editor:
I read Susan Kingsley's article on "Hydraulic Die Forming for the Artist/Metalsmith" (Summer 85) with great interest and it inspired a couple of questions: How much detail can be picked up using the Flexane method of embossing? I want to do some subtle embossing on a fairly large piece of silver (4×6). Can this process pick up something as fine as, say, window screen or 26-gauge wire. Also, can a kick press be used instead of the jack? They develop about 5-10 tons but work much faster and have many other uses for jewelers.

I realize that much of this comes from experimentation. What I am trying to avoid is spending a lot of time and money on equipment that may not do what I want. If you have any information that could help me, I would appreciate it.
—Peter Senesac

Susan Kingsley replies:
First, I would like to answer the question concerning the amount of detail one can get when embossing metal with Flexane. The answer is quite a bit, but it depends more upon the thickness of the sheet of metal being embossed than the thickness of the "die." Thin metal will emboss with greater detail. The overall size (4×6″) of a sheet of metal makes no difference in the detail possible when you are using a 20-ton press. Both 26-gauge wire and window screen will emboss a sheet of 26-gauge copper. The wire will leave a raised (or depressed) line, and the window screen will leave a pattern of raised bumps (or depressions). The image is not as sharp as it is in roller printing.

Several people have asked me questions about the uses of a kick press for die forming. My experience is with the hydraulic press, and related to my work as an artist/metalsmith/jeweler. Therefore, I have asked Eddie Bell of Rio Grande, Albuquerque, who is experienced with many jewelry manufacturing processes, to answer a few of these questions. I hope that this will help you, and others, make the right choices.

I would also like to mention that Rio Grande has just come out with two new products that are closely related to processes described in my article. The RT Blanking System is a low-cost system, involving a specially adapted piercing saw for making shearing dies. The Air Domer is a machine for forming metal sheet with compressed air, which is more limited than the hydraulic press, but has several big advantages for those interested in efficient production, especially of earrings.

Eddie Bell replies:
Susan Kingsley has asked me to respond to Peter Senesac's question about the use of a kick press for forming metal with Flexane. Kick presses are handy tools for jewelry work when short production runs are required. The kick press is easy to tool, quick to use, and can also be quite dangerous. A kick press can crush a finger or hand just as surely as a power press. Five tons is five tons whether it is energized by a leg muscle or an electric motor. Most kick presses are fed by hand, which increases the risk. On the bright side, it is easy to make a kick press safe if good habits are learned. Simple things like a metal block, which is inserted in the press before unloading parts and removed before striking new parts or using tools to reach into the working area, can save fingers.

There are so many factors involved in press work that it almost needs to be looked at in a case-by-case manner. The thickness, hardness, surface area and depth of the forming of the metal are combined to determine the tonnage needed. Less tonnage can be used when the tooling is progressive. A pair of scissors closing while cutting is a simple example of progressive tooling. Think of the force that would be necessary to do the same job if the two blades of a pair of scissors came together in a parallel fashion.

I have used many things for forming dies that have suited my needs at low cost, including hardwood, Kirksite (a special tooling metal), lost wax cast bronze, and lost wax cast nickel beryllium (be careful not to ingest dust from grinding and polishing beryllium alloys) and unhardened steel. Many tool steels can be contoured to the desired shape by grinding

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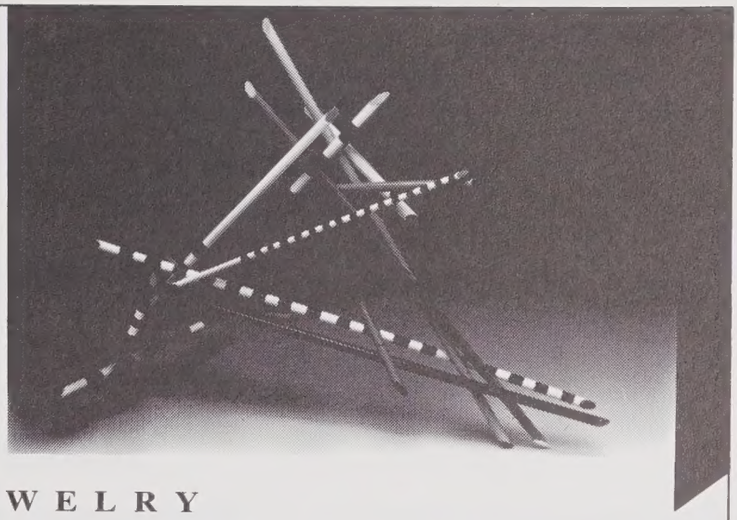

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Master Metalsmith: Robert "Monty" Montgomery

by David Peterson

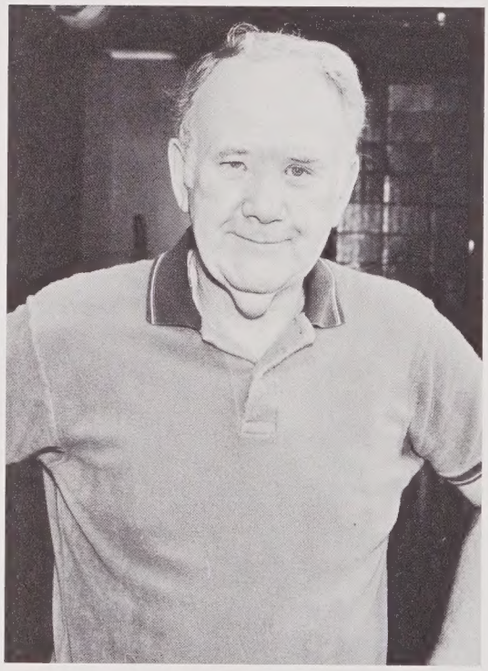
Robert Montgomery surrounds himself in a silent optimism that does not simply ignore adversity, but rises above it. His generous spirit has turned blight to bounty and earned him untold respect and admiration. He is an accomplished artist, a renowned educator and most certainly a remarkable human being. At 60 years of age, Monty has more than mastered the art of metalsmithing, he has mastered the art of living.

Monty was drafted in February, 1943. He served briefly in the pack artillery and the air cadets before his final transfer to the 63rd infantry, just prior to D-Day. The 63rd was thrust into the very heart of the war in Europe, carrying their charge "Blood and Fire," through the Belgian Bulge, the Colmar Pocket and the Allied advance on Heidelburg. On February 27, 1945, Monty found himself in command of the 14 surviving members of a company that had once numbered 187. As midnight approached, 100 recruits reached the 63rd with orders to secure a hill overlooking Setteswaler, Germany. As they dug in, a Nazi Panzer division advanced to challenge; the ensuing barrage of heavy artillery lasted into the morning. Throughout the assault Monty moved from foxhole to foxhole attending the wounded. He recalls with great clarity, "Some of the men, the recruits especially, would scream so that you couldn't tell if they were wounded . . . or just frightened . . . . To avoid getting hit we'd always time the sequence from muzzle blast to explosion. This way we always knew how long we had to take cover. I remember, that night they were coming eight seconds apart. I was between two foxholes when I saw the blast from a Tiger tank. I ran until the count of seven and then just hit the ground." A shell exploded 10 feet away, sending shards of searing shrapnel through his legs and face. Monty lay with his legs paralyzed and his jaw shattered in seven places, unable to move or speak. More devastating still was the realization that he was left totally blind.

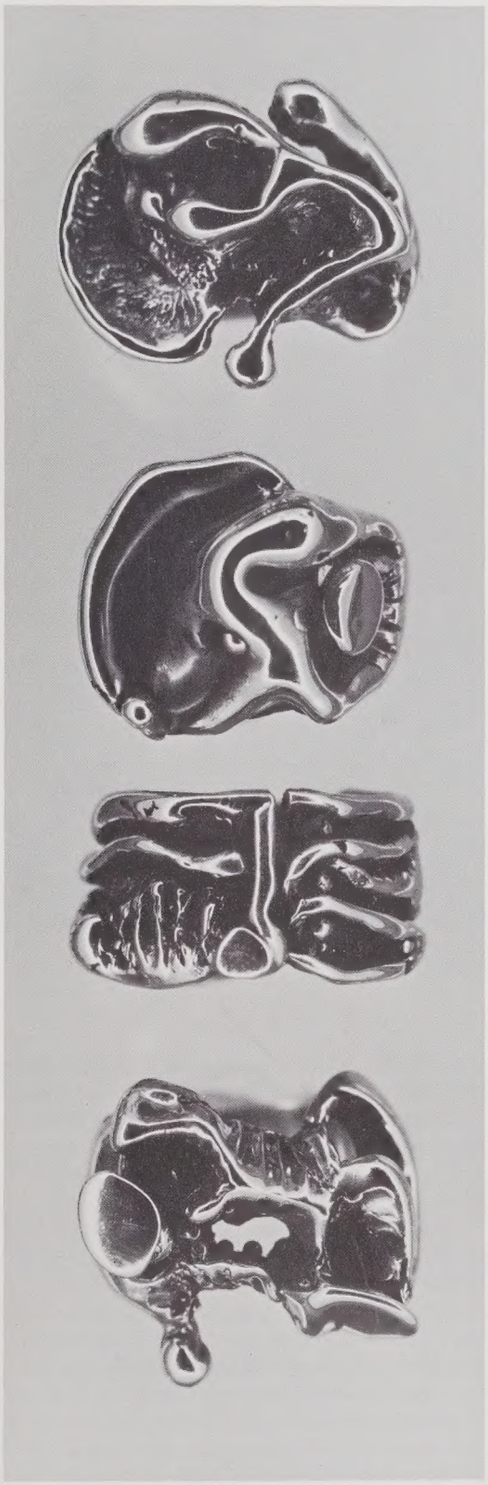
He was found and rushed to an army field hospital; commencing a five-year ordeal that would take him through six major hospitals and 182 operations. With modern reconstructive surgery still in its infancy, the repairing was slow and arduous. Still, the day came, three years later, when the bandages were removed from his eyes and Monty could again see. Within the year he was walking and soon set to the task of rebuilding his life.

His discharge from both the army and Valley Forge General Hospital came in December, 1949. Though he lacked formal training, his interest in the arts prompted him to enroll at the Kansas City Art Institute on the G.I. Bill. Monty recalls this first encounter as one of total bewilderment. "This was my first art class since the fourth grade . . . I was terribly naive, I simply didn't know how to see . . . I still think back to that first day each time I get a new group of freshmen and remember what a shock it was." Monty received his B.F.A. from the Art Institute and, in 1953, enrolled at Wichita State University to pursue his B.S. in Art Education. It was here that he took his first course in metalsmithing. Years of design training had proved especially suited to the medium of enameling, and the following year Monty entered the Kansas Designer/Craftsman Show at the University of Kansas. He was present to see his enameled neckpiece win a purchase award. Carlyle Smith, professor of metalsmithing at the University of Kansas, was also present at the show and recalls, "I cannot remember who introduced us, but Monty and I began a serious conversation about jewelry and silversmithing. The more we talked, the more interested Monty became about metalsmithing." Smith offered Monty a graduate assistantship that would enable him to pursue his masters in silversmithing at the University of Kansas.

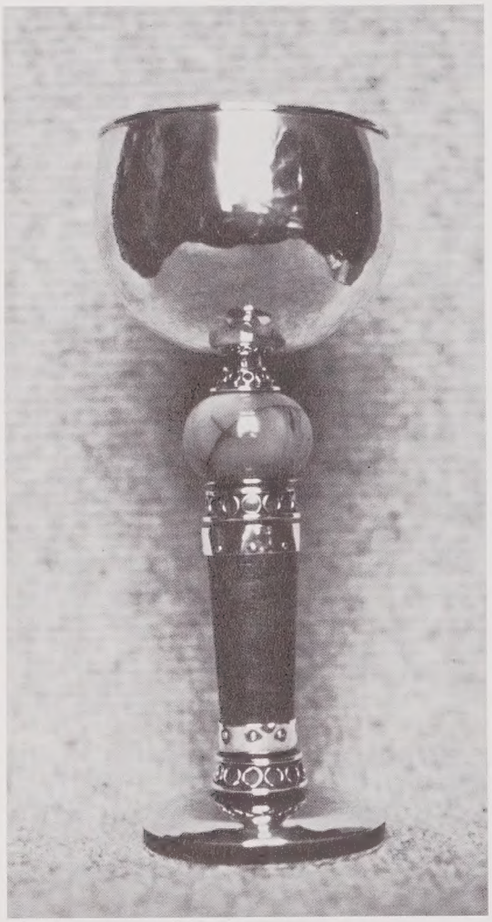
In the autumn of 1955 Monty enrolled in the M.F.A. program at KU, with the opportunity to develop as both an artist and an educator. "Carlyle (Smith)," Monty recalls, "was a tremendous technician. My design sense was pretty strong by this time, but Carlyle gave me the technical control that brought it all together." With these ripening years of study came the formidable task of teaching 24 contact hours of design, metals and color theory. Monty took the task to heart, earning the respect and admiration of his peers and instructors alike. Smith recollects, "Monty was every instructor's dream of what a student should be. I will always remember him as a fine student, an untiring worker and an excellent instructor." Monty so impressed the faculty at KU that he was retained after graduation as a full-time instructor in metals and design. Monty's spirit and enthusiasm for teaching was, albeit unknown to anyone, already helping to shape the future of contemporary metalsmithing in America. His impact upon his students was so profound that many still regard him as the principal influence in their creative development. One young (and admittedly rebellious) student Brent Kington would later say, "His



Top: Robert Montgomery; **above:** Necklace, gold, silver, 1978



Above: *Rings*, 14k gold, 1982, **above right**: *Chalice,* silver, rosewood, amber, approx. 5″ h., 1979; **right**: *Pitcher,* silver, rosewood, 1978



Chalice, silver, rosewood, amber, approx. 7″ h., 1979

influence on my development as a student and his contribution to my professional and creative life was so very important. He gave stimulus and support that continue to be of value and benefit to this day. At a time when I most desperately needed direction, confidence and challenge, he was there for me." Similarly, another former student from KU, Robert Ebendorf, remembers, "As I think back on my experiences as a young artist, Monty's influence comes most to mind. One thing I remember well was his total concern for his students. He took the risk of stepping outside the classroom . . . he even held open forums on Sunday nights . . . a gathering for artists, musicians and intellectuals. He always pushed the 'thinking process,' reminding us that artists are part of a larger community . . . that we had to be aware of goings-on in the world around us. He also brought a great sense of style and taste to the department. I'm sure it was a sad day for the University when he left."

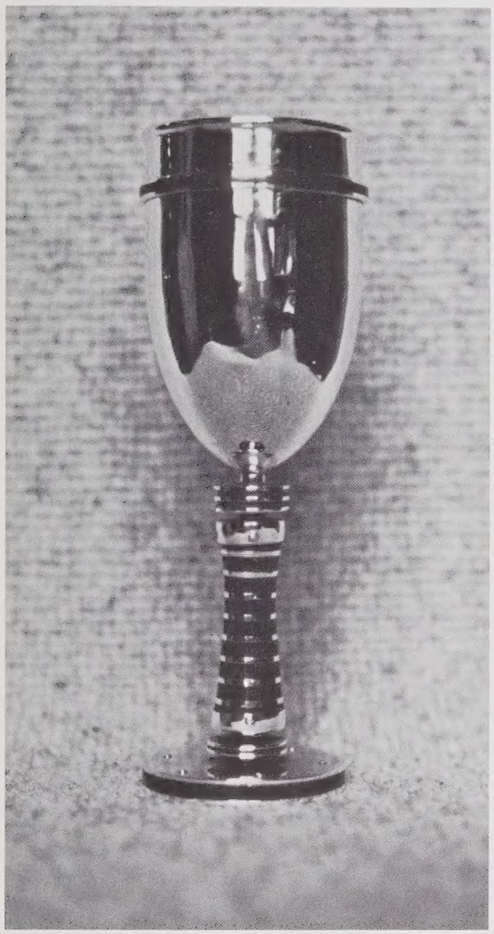
Monty's years at KU may long be remembered as the birthplace of a legacy that, to this day, shows no sign of diminishing. His story would, however, have to continue elsewhere. "The plain truth is," Monty recalls, "my salary was barely enough to live on." In 1964 Monty left KU to head the graphic design program at Indiana State University in Terre Haute, Indiana. Despite Monty's persistence, it was three years before ISU would commit to a metals program. The beginnings were humble indeed. As Monty recalls, "We had one buffer, one stake, one hammer and 18 hand drills . . . I must admit, after the splendid facilities at KU this was all rather horrifying." Yet, in four short years the program had grown with such intensity that he could no longer divide his time between graphics and metal. "We had a new Chairman . . . and he asked me to choose between the two . . . it was really no contest; of course I chose metals."

Twenty years later, Monty remains a distinguished and influential member of the ISU faculty. He continues to provide the personal and thought-provoking instruction that has characterized his many years of teaching. Considering this, it is not surprising that Monty has developed some vigorous opinions about this field. He insists, "Overspecialization is killing us! Metalsmiths, and artists in general, are so often just educated clods in this very narrow field. My best students have always been those who've studied literature, art history, drawing and painting . . . but always with a commitment to metals. Too many curriculums don't allow the student to become more versatile in the arts. We need this well-rounded education, especially the hands-on experience . . . it's the most important part of learning."

It is this immediate and tangible encounter that Monty regards as so significant. Yet, he acknowledges as a distinct difference between "hands-on" education and purely technical training. "Too often techniques dominate the creative process. This is not to say that techniques aren't important, but I do feel that innovations in the technical aspect of making objects are not as great as the creative energies that exist in our young students today." While he finds function for function's sake disturbing, Monty recognizes the integrity of the functional tradition in metalsmithing: "I look for that creative form that does not alienate function, but exists with it in a balanced harmony. To achieve this our students must learn form, form, form! Only with such a constant exposure and awareness can we escape from this thing of obvious function."

Chalice, silver, rosewood, ivory, approx. 6″ h., 1979

Monty rarely speaks of his own work. Always quick to change the subject to the accomplishments of his students, his modesty does not lessen the significance of his own production. His commissioned pieces can be found in private and public collections, churches and sovereign households throughout the United States and abroad. One of his first patrons King 'Ibn Sa'ud of Saudi Arabia commissioned a sterling coffee service in 1958. Monty was, by this time, already gaining considerable recognition in the United States. In entering nearly

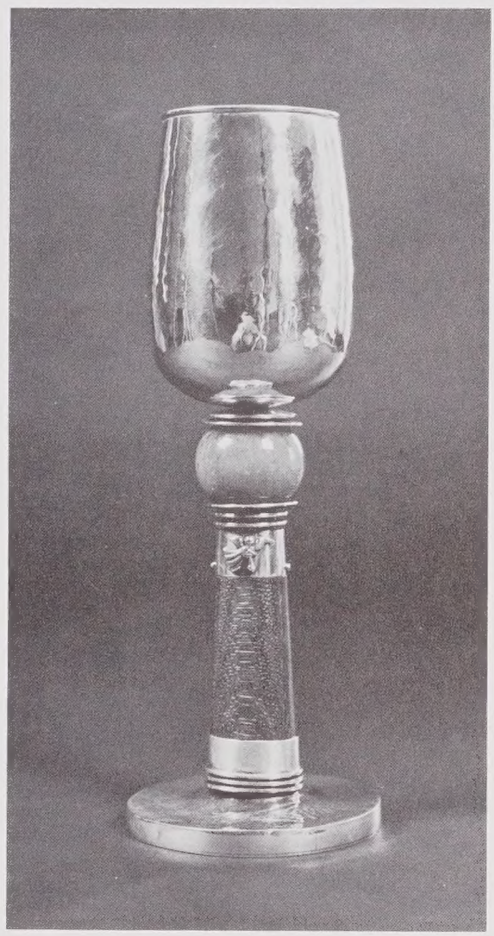


Chalice, silver, rosewood, approx. 6" h., 1979

every competition and exhibition available to him, he had amassed countless awards and honors. By the mid 1960s the process had become so routine, in fact, that he suddenly made a transition of thought and purpose. "I realized that producing pieces for shows had become almost automatic . . . lacking the excitement that it once held. It somehow became more exciting to see my students getting into, and sometimes winning, exhibitions and competitions."

It has long been Monty's charge to elevate his students' work from a mere exercise in technique to an expression of the creative individual. Similarly, Monty recognizes no clear dichotomy between craftsmanship and creative self-expression. He feels instead that techniques are an outgrowth of creative necessity and, likewise, concepts exist to lend substance to man's almost instinctive need to create, to leave a mark. In retrospect, one thing is clear: Monty holds a deep respect for the hand-wrought object, and his own work stands in praise of this tradition. The bane of all artists, perhaps, is that their work will never live up to their personal ideals and lofty aspirations, for concepts and attitudes grow far quicker than a body of work. Yet, if we turn a sympathetic eye to the work at hand we can glimpse a measure of these ideals in the creative growth that led to their formulation. Monty's work supports this notion with sterling clarity. While he chooses to work in the traditional idiom of the functional object, both practical and symbolic, his work possesses a physical integrity that seems to laud the very nature of the medium and processes used in shaping it. The sculptural grace of his cast rings derive their strength from the unmistakable ebb and flow of molten wax. They seem to characterize Monty's contention that materials are to be guided, never forced, that a material should express its inherent qualities. This attitude is evident in all of Monty's work. His fabricated pieces are straightforward and elegant, proudly constructed and direct in their use of line, form and texture. Although his work appears candid and unlabored, Monty takes great care in composing each piece. He brings to his work an almost classical monumentality that owes more to sublime proportion than to ornamental extravagance. Monty has always stressed that "to understand why an object looks good is to understand proportion." Indeed, he has applied this understanding with a resolution that has escaped the inevitable obsolescence of fleeting fashion.

Throughout his years of production, one result has remained ever-present: the quality student. With great skill and humanity he has crafted artists and educators who have, in turn, enriched the field with their talents. It would be difficult, if not impossible, to list here all who have benefitted from Monty's guidance. Suffice it to say that his former students are ranked among the nation's leaders in education, metalsmithing and graphic design. A triple by-pass operation six years ago, chronic diabetes and two heart attacks have done little to dissolve the spirit and selfless energy of this great man. Brent Kington adds, "I have never known a teacher who was so consistently concerned with his students, inside as well as outside the classroom. He has, for so many years,



Chalice, silver, rosewood, amber, approx. 6½" h., 1979

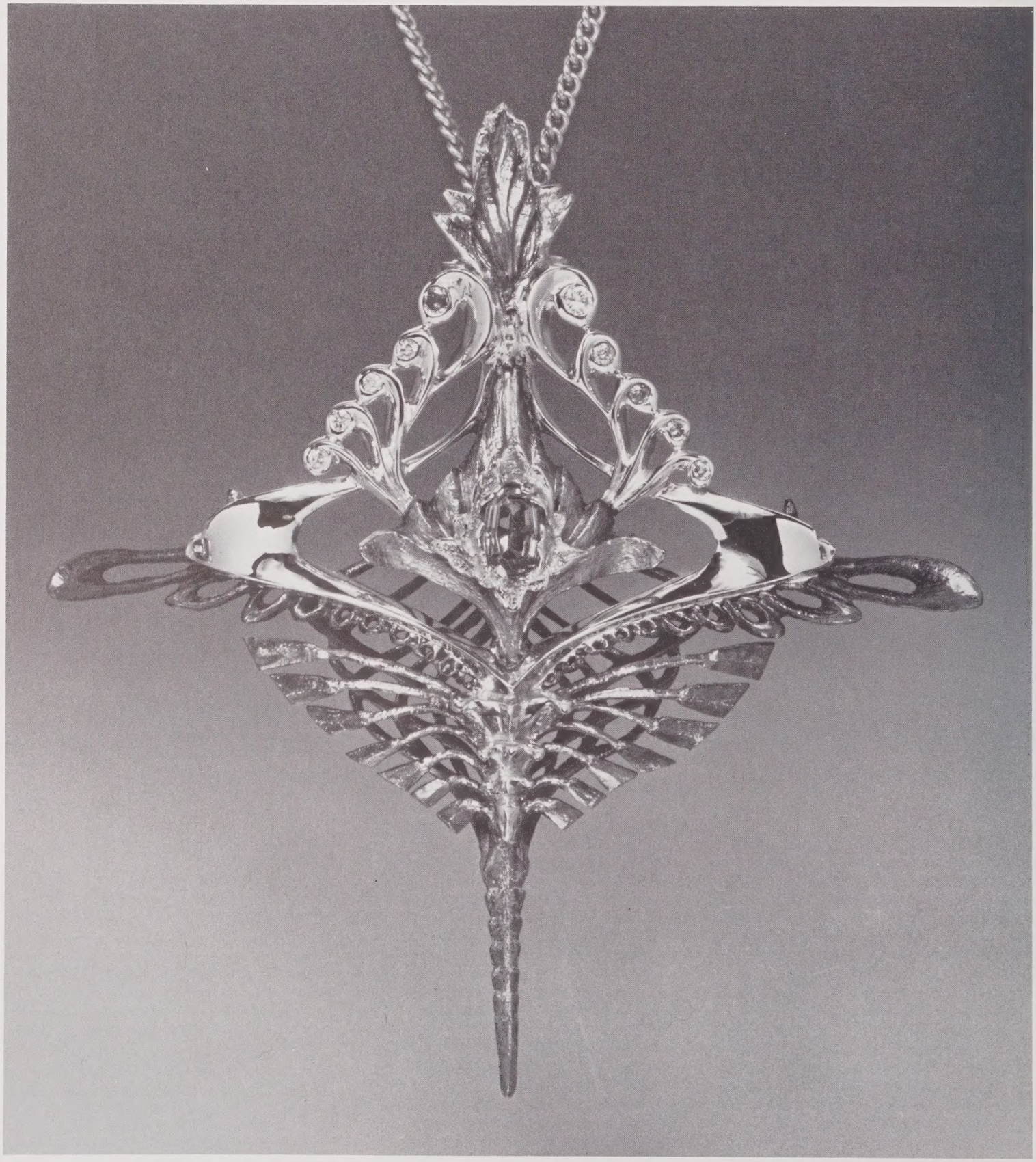
put forth untold energy, investment of personal time and concern for their growth and development." Monty deserves the deepest respect for all that he has given to the field of metalsmithing, and unbridled admiration for all that he has overcome to do so.

Indiana State University honored Monty with a major exhibition, featuring the work of his most accomplished former metals students, in the University's Turman Gallery, March 23 to April 14, 1985.

David Peterson's association with Robert Montgomery began in 1980 during graduate studies at ISU. Peterson now teaches metals at Purdue University, where he is an assistant professor of art and design.

Bi-Metal Casting to Titanium

by Mark Baldridge



Mark Baldridge, *Pendant*, silver, titanium, diamonds

Titanium and the other refractory metals offer the metalsmith a new range of exotic colors—colors that are beautiful and subtle. The saying "less is more" applies to titanium, since the colors are created by the refraction of light rather than pigments. As you rotate a piece of titanium jewelry, the colors vary and the interest level is maintained—different types of light create different shades of color. The colors available in refractory metals are much richer than those available in enamels, plastics or gemstones. Opalescent and iridescent colors seem to exude a touch of mysticism; they suggest instead of insist.

Most artists leave titanium in its original form (sheet, rods and tubes). This often looks like sheet, rods and tubes when it's finished. They do not take advantage of dimensional possibilities, because titanium cannot be cast or soldered except in an oxygen-free atmosphere. Artists who think that rivets are beautiful utilize them to join titanium. I believe rivets are rivets. Some artists are cold-forming the metal by sinking, forging or bending.

Bi-metal casting is the casting of one metal to another. The first metal is formed and undercut in such a manner that the second metal will lock to it. The first metal is formed into the wax and invested as a wax and metal model. The second metal is cast in the conventional way. Bi-metal casting to hot- or cold-formed titanium minimizes many dimensional restrictions and opens a new range of design possibilities. Any metal that will withstand normal burn-out temperatures (approximately 1350°F) such as sterling, gold, copper, brass, bronze, corten and titanium can be placed into the wax and invested. (You cannot bi-metal cast to niobium, which is attacked by either the high temperature, the investment or both.) The second metal can be any castable metal. Normal burn-out and casting temperatures are utilized. Theoretically, the metal that is in the mold should have the higher melting point. If the second metal has a higher melting point, it could melt the first metal on contact. In reality, unless the metal in the mold has very fine parts; or melts several hundred degrees lower than the incoming metal, there is little chance of fusion. Actually fusion might be a blessing since it would eliminate the need for undercutting the metal to be cast in place. There are special investments that provide a reducing atmosphere. These encourage fusion. However, fusion rarely occurs even in a reducing environment. These special investments are not required. Some people even flux the first metal and fuse tiny pieces of solder on the contact area in the hope that the incoming molten metal will melt the solder and solder the two metals together.

However, this is also unreliable. In practice, most fusion efforts do not work. Either you must accept that two separate metals will emerge from the mold, which can be soldered together later, or you must design the first metal in such a way that it will mechanically lock with the second metal during the casting.

Cold-Forming Titanium

Although titanium is tough, it can be cold-formed. If possible, purchase fully annealed titanium. Obviously thinner gauges are much easier to form. However, it is possible to form 16—18 gauge sheet with modest effort. Since titanium is so much harder than nonferrous metals, a cutting lubricant should be used. You need to allow extra metal to compensate for loss during sinking. Extra metal is also needed around the edges if you are going to embed the titanium in wax (for interlocking areas that don't show).

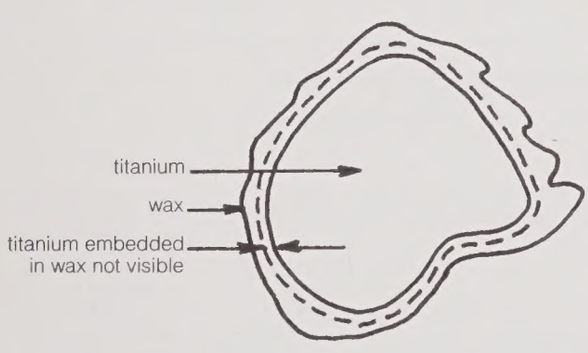


Diagram 1 (top view)

Cut out the desired shape from sheet titanium and place it on a hardwood surface. If a variety of depressions already exists in your wood block use a dapping punch to hammer the titanium into the selected recess to the desired depth. Often the correct depression must be carved into the wood. A flexible shaft machine and large burrs will speed up this operation. Thicker gauges and deeper depths require more deformation. This quickly damages the wooden form. The end-grain of hardwood such as maple works very well.

A variety of forms can be prepared by combining large sinkings with small; working with opposite faces; sinking some parts and not others; or simply letting the metal tear open and then adding creative touches to the opening. The metal can also be formed with one or two pliers. You might consider setting aside a separate set of tools for exclusive use with titanium because it quickly dulls tools such as files, drills and punches.

Hot-Forming Titanium

Titanium, like steel, is hard when cold, but is very malleable when red hot. Direct a torch on the area to be formed. When it is red hot use pliers and bend as desired. For complex curves several heatings may be necessary because the steel pliers quickly draw heat from points of contact. Titanium is somewhat brittle so drastic bends should only be done when it is red hot.

Carving Titanium

Shaping of titanium can be accomplished subtractively—simply grind away any undesired areas. While this is a time-consuming process, it offers the possibility of creating unique three-dimensional shapes. Thick sheets can be ground thin on their edges, maintaining original dimensions and strength but appearing very thin and light. Grinding, like most abrasive methods, requires that you work from large grinding wheels and files to smaller ones, and coarse to fine. If a large grinder is available use it first to remove as much metal as possible. When large wheels will no longer perform, switch to smaller grinding wheels, such as the 1" x ⅛" Mizzy wheels (available from most jewelry supply companies). These wheels are available in many diameters and widths. As you grind, the metal will have to be dipped in a coolant (water) as the need arises. Always wear proper goggles and a respirator while grinding and always have the wheel cut away from the edges and not into them. Otherwise the metal can be caught and thrown.

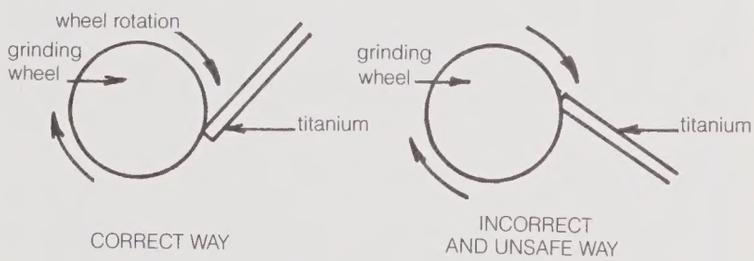


Diagram 2 (side view)

Save some of the 1" grinding wheels whose diameters have been greatly reduced by the grinding, so that you will have smaller wheels (such as ¼") when you need them. Cut-off and separating discs are also good for fine carving. Again, save some smaller diameter discs for final carving. Grinding leaves an interesting surface but I believe that it is not as colorful as a polished or burred surface. It also usually looks somewhat crude. After grinding, various dental burrs can be used to provide delicate or detailed carving. Again, work from large to small (for example, 1/16" cylinder-shaped burrs down to cylinder burrs the size of a needle). Do not execute the detailed carving before casting because the titanium forms an oxide layer during the burn-out procedure. You must remove the oxide layer from the titanium after casting, so there is no sense in carving detail twice.

It is necessary to decide which interlocking method(s) will be utilized *prior* to any carving, forming or cutting of the titanium in order to leave sufficient excess metal. The sequence is very simple. First, you must plan on how the titanium will be locked in place when it is surrounded by incoming metal. Second, you must make sure the titanium is locked in place by the investment so it will not shift when the wax is drained during burn-out.

Bi-Metal Wrapping

One way of locking the titanium would be to wrap wax wire around the piece so it cannot escape. It would be best to notch the tita-

nium where the wax will be wrapped prior to the wrapping to reduce the amount of wrapping needed. This wax will later be replaced with the cast metal. Example:

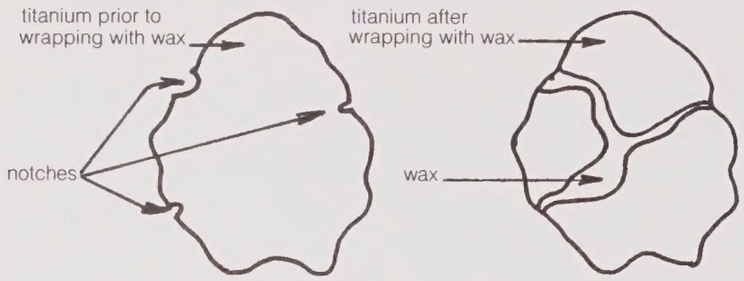


Diagram 3 (top view)

Another variation of wrapping is to shape the wax around part or all of the periphery of the titanium:

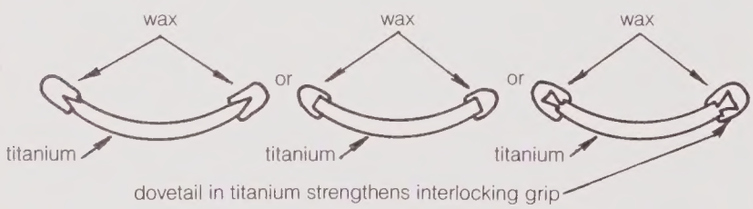


Diagram 4 (edge view)

Bi-Metal Riveting

Another way of locking is to drill holes in the titanium and carve one side of the hole larger. These holes should be a minimum of 1/16" in diameter. When using thick titanium, it is not necessary to drill entirely through the metal, just a minimum of 1/16" deep. In all cases, the more undercutting and the wider and deeper the holes, the better, because cast metal is not strong and much stress takes place during heating and cooling. Wax should be placed in all of the holes so the incoming metal will form the rivets.

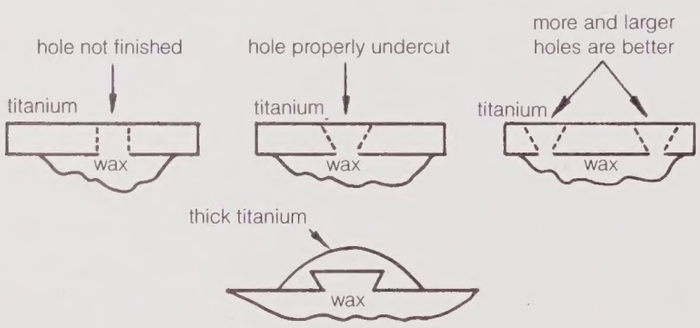


Diagram 5 (edge view)

Other variations include placing wax on both sides of the titanium so that undercutting is not necessary:

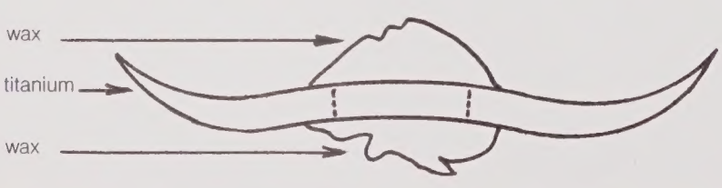


Diagram 6 (edge view)

Likewise, several layers of titanium can be stacked:

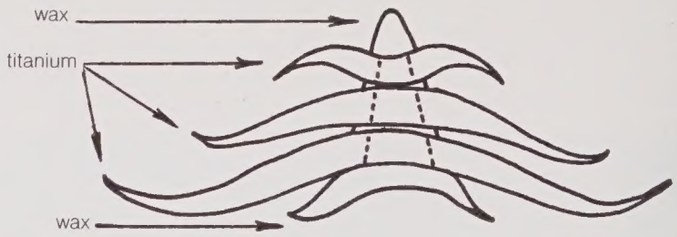


Diagram 7 (edge view)

Obviously there are unlimited combinations, determined only by the desired results:

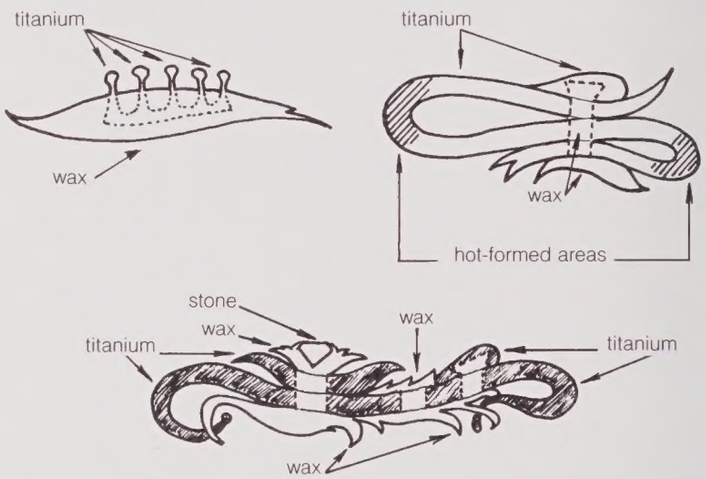


Diagram 8 (edge view)

The wax may be dripped into place. It is possible to cut a hole in the wax, insert the titanium and then seal it with more wax. My preference is blue File-a-Wax because of its strength and machine ability, but any wax should work.

Remember that you not only have to interlock the wax with the titanium (or vice-versa) but you must interlock the titanium with the investment. Try to visualize whether the metal will shift or drop in the mold when the wax is eliminated. In theory, all you need is a hole or two through the wax directly beneath the titanium that fills the investment and forms pillars to lock the metal in place during burn-out.

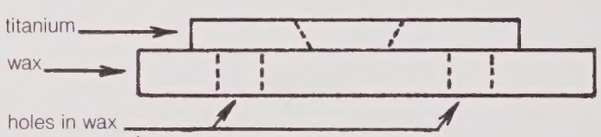


Diagram 9 (edge view)

These holes may be unnecessary, especially when the titanium is dimensional, or when it has projections into the air, since the investment will be below it:

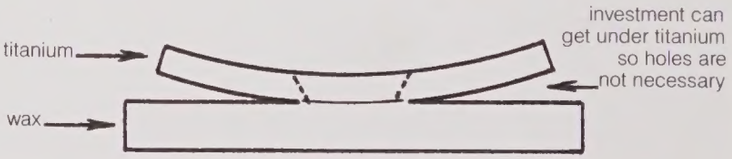


Diagram 10 (edge view)

When "investment pillars" are necessary (formed by holes in the wax), be sure that spruing and investing are done in such a manner that these wax holes will not fill with air and create a void.

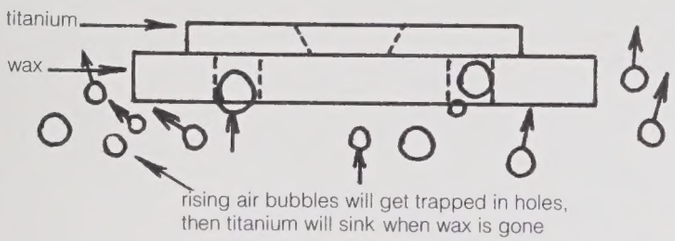


Diagram 11 (edge view)

Spruing vertically or undercutting the titanium edges would correct the situation:

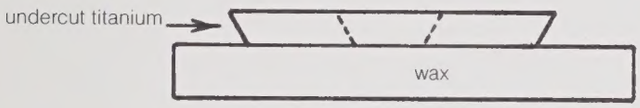


Diagram 12 (edge view)

Do not put the holes in the wax directly beneath the holes in the titanium:

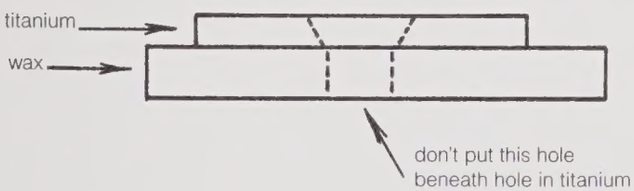


Diagram 13 (edge view)

Spruing and Investing

Most spruing and investing procedures are the same as in traditional lost-wax casting, with the following exceptions: First, it is important to weigh the titanium *before* adding wax to it. This weight must be subtracted from the total weight of the completed wax/titanium model before multiplying by 10 (for silver) or 14 (for 14k gold): otherwise, you will cast with excessive metal.

Second, any very thin, delicate areas of wax that come in contact with the titanium for any distance (approximately ¼") must be "beefed-up." After casting, these areas can be recarved down to their original desired thickness. Incoming metal does not flow well over existing metal in the mold, which draws heat from the incoming metal more quickly than the investment does. You must compensate by using two or three times the normal amount of sprues. Thinner areas may need even more. If in doubt, sprue it. You could try to compensate for this problem by raising your mold or incoming metal temperature, but either will result in increased porosity.

When elaborate sprue systems are needed, three important principles should be observed:

1. Sprues should be as close to the model as possible in order to keep them short.
2. A "trunk-and-branch" arrangement (Diagram 14, center drawing) is superior to a system in which all individual sprues originate at the sprue former (left drawing).
3. In order to reduce turbulence and delay in filling, the cavity trunk and branches should run as close to parallel as possible and be oriented perpendicular to the sprue base as in the center drawing. Sharp bends and sprues lying parallel to the sprue base (right drawing) interfere with efficient metal flow.

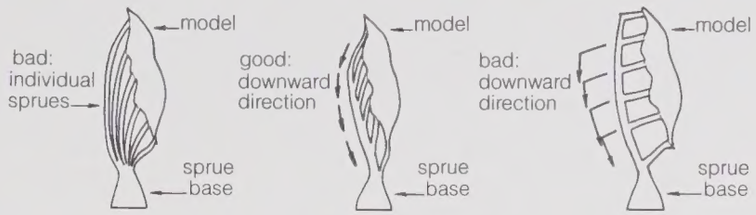


Diagram 14 (side view)

While a "trunk-and-branch" system could be accomplished by simply pushing together several smaller sprues (and filling between them), it is simpler to use a thicker sprue wire as the trunk coupled with thinner guage wires as necessary (for instance an 8-gauge wire that divides into three 12-gauge wires). These thicker sprues will keep the metal hotter and molten for longer periods

Mark Baldridge, *Pendant*, silver, titanium, diamonds

than if the metal flow divides at the top of the sprue former.

Most normal investments will work well, but some contain ingredients that produce cleaner castings. However, additives may attack any metal already in the mold and cause pitting. Try a test casting on a small sample before entrusting the model of a major showpiece to an untried investment.

Burn-Out, Casting and Clean-Up

Burn-out procedures in bi-metal casting are the same as in conventional casting. You will find that you develop your own temperatures and burn-out schedules. Whatever works is fine. My suggestion is a 6 to 8 hour total burn-out that brings the flask up to 1350°F over a 3 to 4 hour period, allows soaking at 1350° for a couple of hours, then a reduction to about 1000°F for at least 30 minutes prior to casting. I am also a believer in centrifugal casting because it seems to get the metal into the mold quicker than vacuum assist.

Once the casting is completed, a bi-metal mold should not be subject to extreme temperature shocks. Theoretically, you should place it back into the kiln, which has been turned off. In practice, this may be unnecessary and you can set the mold aside to air-cool before digging out your casting. *Do not plunge the hot mold into water.* When you dig out your casting and remove the sprues, care should be taken not to exert much pressure against the joints. Do not utilize solutions that remove investment; they usually will attack the titanium as well, even though they do not contain hydrofluoric (HF) acid.

Tri-Metal Casting

To obtain even more variety in metal colors, consider casting a third metal. There are three ways of producing a tri-metal casting:

1 In Diagram 15, the pre-formed gold and titanium part are joined by the wax, which eventually is replaced by silver. This requires one casting step, except for a possible previous casting step used to make the separate gold piece. If the gold piece is fabricated from wire or sheet, then no previous casting cycle is needed.

Diagram 15 (edge view)

2 In Diagram 16, two complete casting steps are needed: The first produces the gold-to-titanium bi-metal casting. The second produces the silver-to-gold tri-metal casting.

Diagram 16 (edge view)

3 A third metal could be cast in the same mold as the bi-metal casting *if, and only if,* independent sprue systems could be arranged. They cannot intersect and you cannot violate minimum investment standards (approximately ½" between sprues or models). If one sprue system comes too close to the other sprue system, incoming metal from the first casting could smash through and plug the other sprue system. Once the first casting is completed, simply rotate the mold in the casting machine and cast the second metal. Obviously a mold like this is harder to sprue and invest, however it can save time and provide unique results:

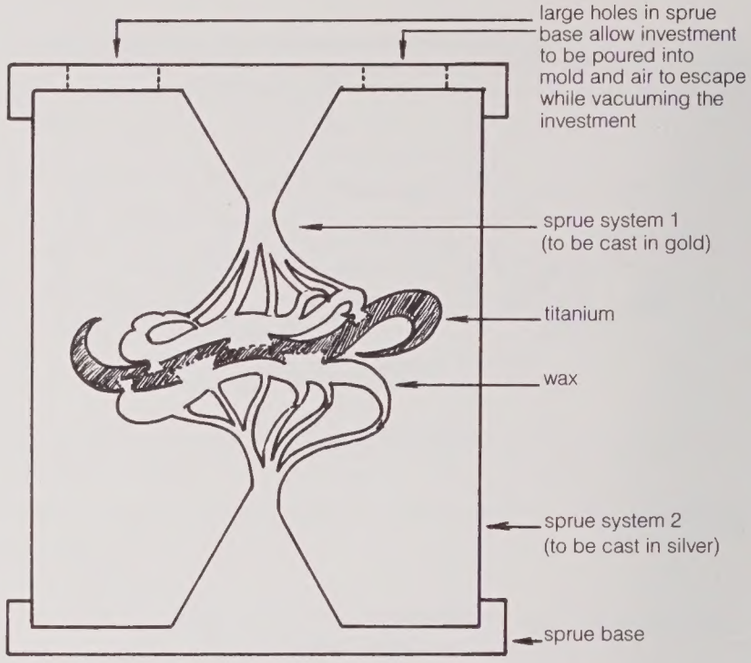

large holes in sprue base allow investment to be poured into mold and air to escape while vacuuming the investment
sprue system 1 (to be cast in gold)
titanium
wax
sprue system 2 (to be cast in silver)
sprue base

Diagram 17 (side view)

Other metals can be soldered onto bi-metal castings, thus expanding design possibilities. Again, it is best to heat and cool bi-metal castings more slowly than normal objects.

Casting, like other processes, should only be utilized when the design justifies the technique. Likewise, if you are utilizing bi-metal wrapping and/or rivets, remember that the reason you are using these techniques is to increase the continuity of design between two metals that are difficult or impossible to join via normal techniques. If you don't want the wrapping and rivets to look like wrapping and rivets—blend the necessary techniques into the design. On the other hand, if you like rivets, then don't utilize bi-metal casting—just use rivets.

Finishing and Coloring

Coloring is the very last step. The piece must be completely finished and cleaned. Surface treatment and preparation are very important—if the surface is dull, the color will be dull; if the surface is shiny, the color will be shiny. As you will remember, the oxidization layer formed during the burn-out and casting must be removed with hydrofluoric (HF) acid or abrasives or you will not be able to color it. Note that HF skin burns are painful and slow to heal. (Treatment for burns is different than that used for other acids. If you must seek medical help for HF burns, be certain that the doctor understands what material has caused the condition. Unfortunately, medical personnel may not be aware of the specific treatment indicated for HF burns.)

If you are carving the titanium with fine dental burrs, they will leave brilliant chatter-marks which can give beautiful iridescent effects when colored.

Wash the titanium with warm water, detergent and a touch of ammonia. Dry the piece and do not touch areas to be colored. Fingers are greasy and the grease prevents the metal from forming color. The electrolyte used to conduct electricity to the titanium will immediately oxidize (and blacken) non-titanium metals during the coloring process, so they must be given a protective coating. If painting is to be done, only border areas must be covered. Rubber cement works well as a protective covering—it dries quickly and can be removed quite easily by rubbing. After coloring the piece, rewash it in hot water, ammonia and detergent.

Coloring procedures are basically the same, except that higher voltage is required to obtain desired colors. The clip of the electrode can be attached to any part of the bi-metal casting and does not have to touch the titanium, since the nontitanium metal also conducts electricity. However there seems to be an electrical interference or resistance along all borders between the titanium and the other metal. This leaves an uncolored strip of about 1/32" wide.

Safety procedures should be strictly exercised as in all titanium coloring.

Bi-metal casting, once mastered, expands an artist's dimensional and technical possibilities. This is especially true when metals that cannot be soldered or cast are used. You are only restricted by your level of imagination and creativity.

Himalaya Range necklace, enamel, woven metal, 5 × 2½ × 21", 1979. Photo courtesy: American Craft Council

Master Metalsmith Miyé Matsukata: A Jeweler's Legacy

by Robert L. Cardinale

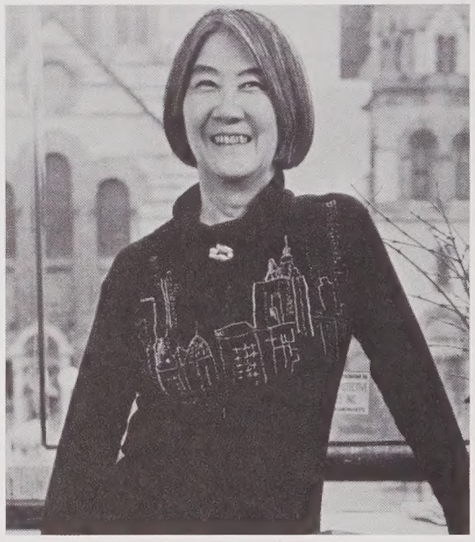
I believed then, as I do now, that when you create art just for sale your horizons shrink. I have always believed that awareness and understanding come first, then outlets for expression present themselves.
—Miyé Matsukata, 1979

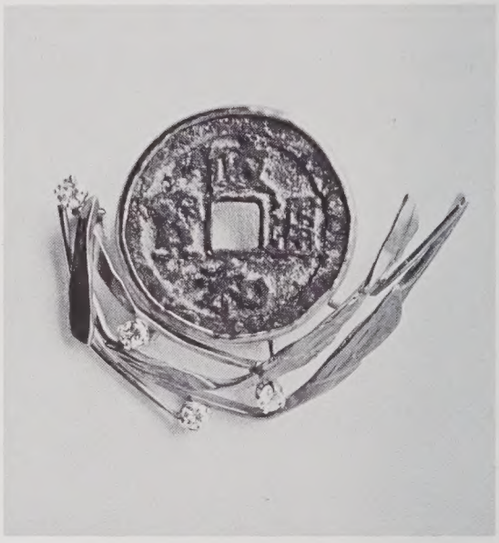
When I began writing about American metalsmithing and jewelry and researching influential artists of the 1970s, the name Miyé Matsukata came up often as a jeweler who had made very rich and significant pieces using nonprecious stones, ancient coin, beach glass. In 1981, I had hoped to meet and interview her in Boston, but, unfortunately, she died a few months before my visit, and I was subsequently unable to gain access to her records. A few years later, at a retrospective show, I saw for myself the strength of her work, but it wasn't until recently, at the urging of Margret Craver Withers, who was trying to get Matsukata's papers for the Archives of American Art, that I began exploring her stylistic development. Just who this artist was and what motivated her began to unfold as I probed her voluminous records and sketch books.

Miyé Matsukata was born in Tokyo on January 27, 1922. Although her parents were both Japanese, her father had been in government service in New York City and her mother was born and raised in Riverside, Connecticut. When her parents left the United States to return to Japan, they took with them an American teacher who became part of the Matsukata household in Japan. Miyé received the traditional upbringing of a daughter in an important household. (Her grandfather was Japanese Prime Minister Masayoshi Matsukata and a noted art collector. Her uncle Kojiro established the famous Matsukata Collection of Western Art in Tokyo.) She studied traditional flower arranging and watercolor painting, although the formal floral arrangements were often tempered with her mother's arrangements of wildflowers. She was taught formal methods of sewing, yet she and her sisters sometimes cut patterns from *Vogue* magazine.

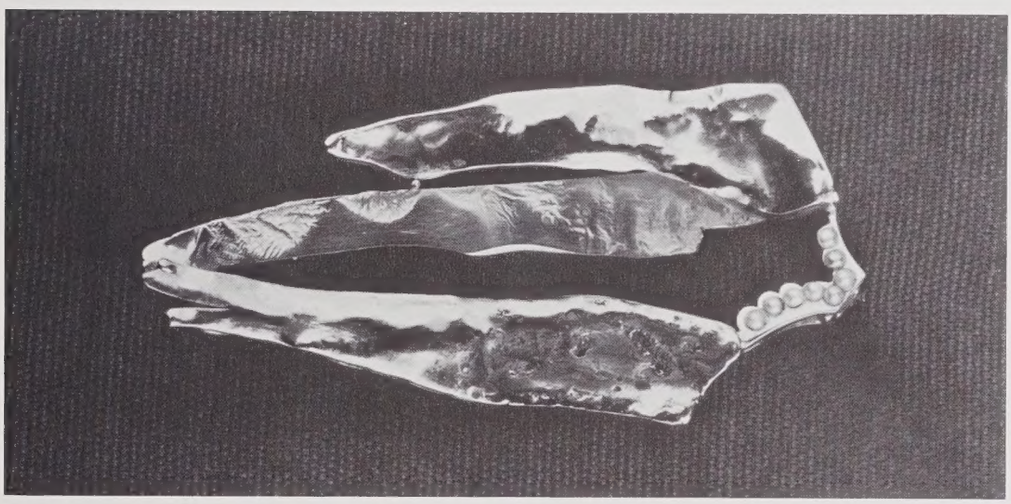
The exceptional activities of the Matsukata family are exemplified by Prince Matsukata, Miyé's grandfather, who is credited with introducing Christian Science beliefs to Japan. This belief ultimately led to Miyé being sent to the American school in Japan and eventually to Principia College (a Christian Science school) in Elsah, Illinois, where she studied from 1940–44. While she was not interned, this period was not a time of easy freedom for her or any Japanese person in the United States.

After graduating from Principia, she enrolled in the Boston Museum of Fine Arts School and worked there for four years, studying metal under Joseph Sharrock. There, she received a rigorous training in classical holloware and jewelry, graduating in 1948/49 and was awarded a Travel Scholarship. She chose to go to Scandinavia (1950) and was advised by Margret Craver (then at Handy & Harman) to visit the shop of Baron Erik Fleming. She arranged to work in his Atelier Borgila for a short time. Of that experience she noted, "I tried to capture the viking spirit and reduce the influence of the oriental style of flowing line."





Top Left: Miyé in her simply equipped studio with H.H. Richardson's Trinity Church in the background. Richardson's famous alternating light and dark stone patterns were deliberately included in Miyé pieces (photo probably 1980); **top right:** Ancient Chinese bronze coin brooch, 24k and 18k yellow gold, diamonds, around 1968; **above:** Enamel gorget neckpiece depicting the Boston skyline and the Charles River. Miyé's spontaneity and lack of concern for rigorous enameling technique is evident, around 1975. Photo: Ansen Seale



Top: *Brooch,* 24k and 18k gold with Egyptian Pharonic tube beads and disk beads, around 1968; **center**: *Wings* pin, 24k and 18k gold, seed pearls, awarded honorable mention in the First National Cultured Pearl Competition, although clearly the focus was on the texture and "flying" richness of the wing forms rather than the pearls, 1966; **above**: *Haystack* pin, 24k and 18k yellow gold, diamonds; this pin not only reflects the beauty of the rocky coast of Deer Isle, Maine but also the "Gobo Mori" stone walls of Tokyo

Upon her return to Boston, she continued to work in the recently formed Atelier Janiyé. This shop, set up in a basement-level space at 506 Beacon Street, was a partnership with two former classmates Naomi Katz Harris and Janice Whipple Williams. By taking selected portions of their first names, the name Janiyé was created. Adding the rather pretentious "atelier" was an attempt to display both sophistication and artistic seriousness to this venture. This partnership lasted until the late 1950s, and of this period, Miyé has said:

> "For the first decade-and-a-half of my career, I made almost anything—a key chain with the facade of Massachusetts General Hospital, an elephant pin for a campaigning Republican, along with the usual requests, including wedding and engagement rings.
>
> "Then too, I tried to find a good potboiler—that something which takes the least amount of effort to produce with the minimum of time and cost, of materials, and which brings in the money so that I could have the freedom to create. I never found one. I tried mass production by having my designs made by hand in Japan and then tried to distribute by mail order.
>
> "I sent my new creations to every museum show which invited me. I took tables at craft fairs and sold through gift shops and galleries. In point of fact, I was glued to my work bench for 15 years.
>
> "The worry about making ends meet was constant. Though I worried, I still was able to pay the rent and supplies and to meet whatever payroll I had. Looking back, I realize that along with those artistic disciplines, I was given a sense of discipline in how to manage money."

The work of this period was almost exclusively in sterling silver and, while very competent, manifests an uncertain esthetic direction and seems to be in the mode of marketable 1950s jewelry design, as contrasted to any strong sense of artistic style or expressive intent.

The Janiyé partnership lasted until 1958, or about the time that Miyé moved to a well-lighted, second-floor shop at 551 Boylston Street overlooking Copley Plaza and the magnificent Trinity Church of H.H. Richardson—an artistic work she much admired for its form as well as its distinctive stone patterning. It was here that she worked until her untimely death at the age of 51 on February 16, 1981. This move signaled a new phase in her maturation as an artist, jeweler and business person:

> "In the late 60s I came to realize that if I wanted to sell beautiful objects, I had to have surroundings of equal quality. I took out a loan and invested in adding a display room, with showcases designed and made by a wood designer, who carried out all the requirements of what by now had become my couture services in jewels. I came to see that there is an art to business, too, as well as the business of art."

In her new location Matsukata's style began to evolve. In 1962, she first began to use nonprecious materials in her pieces, ivory of mammoth tusks and petrified whale bone brought

to her by a client. But it was not until she received a second Travel Grant in 1966 from the Boston Museum of Fine Arts School that her work took a decided change. While traveling to the Middle East and Greece, she became caught up with the beauty of faience and the rich color of pure gold in Egypt. At first she rejected using 24k gold in her own work, due to its softness, but after beginning to laminate it onto 18k for strength, she became captivated by its rich color.

Both her confidence and the richness of her style were growing. She received an invitation from the *Yomiuri Shimbun* newspaper to do an exhibit of American jewelry at the Odakyu Department Store in Tokyo. The intent of Odakyu seems to have been to show major trends in American jewelry and to create a strong consumer market for the pieces that they presumed Americans were rushing to buy. Miyé asked Olaf Skoogfors (then a professor at Philadelphia College of Art) to exhibit, but since he was Scandinavian, Stanley Lechtzin (a close colleague of Skoogfors teaching at Tyler School of Art) was also asked to exhibit to make the show more "American."

The Matsukata pieces in this 1968 exhibition were the pieces of a mature artist. Her style, vitality and confidence show in her well-known ancient Chinese bronze coin brooch. The coin with its distinct square center hole and its rich patinaed surface command attention. Yet she brings power and playful movement to the piece with the light, textured grass forms that support it. The four round diamonds punctuate and highlight the movement of the piece as well as add credibility in the eyes of the consuming public. Miyé's sensitive attitude to the commerical reality of business without compromising her artistic integrity was a highly developed strength. It is a manifestation of the Japanese attitude of respecting the forces of both beauty and power in the natural environment.

In a May 1968 interview in Japan, Miyé articulated her views, which are evidenced especially well in the coin piece: "I would like to maintain a spirit of design that is quiet and free. I feel metal can have a life if it has motion and less rigid confines." Her pieces of this period had no boundaries other than stone bezels and many of the forms, such as the cover photo of the catalog, seem to be frozen moments of motion highlighted by a precious stone, series of beads or pieces of beach glass.

In the piece using the Egyptian Pharonic tube beads, she displays her control of motion by allowing the beads to tumble into space and then capturing them quickly with thin, light, 24k gold wrappers. Additional tube beads of gold complete the sensitive harmony of movement. Even the prongs holding the round faience beads appear quick and spontaneous. The rigidity of the metal seems to vanish because of the respect she displays for its nature and qualities—as though she is one with

Large crocheted necklace using a piece of ancient Chinese brocade; sewn into the neckpiece are ancient Chinese glass beads and pieces of coral; one of the two hanging cloisonné beads has been lost, around 1980. Photo: Ansen Seale

Clockwise from top left: *Pin,* 24k and 18k gold, opal—cover photo of the "American Jewelry Exhibition" catalog, Tokyo, 1968. Collection: Arla Boru; *Pin,* faience beads from Egyptian tomb, 24k and 18k yellow gold—inspired by the tomb columns at Luxor, Egypt, around 1974; *Brooch,* 24k, 18k and 14k yellow gold, Egyptian faience beads—the square metal piece echoes the hole in the ancient Chinese bronze coin, 1967; *Brooch,* 24k, 18k and 14k gold—reflects the beginning of Miyé's fascination with stones and ancient masonry, 1964. Collection: Mrs. Michael Cantor

the metal and exerts a control over it that harmonizes perfectly with its characteristics.

The flowing oriental line is indeed gone from her work, but the sensitive spirit "Sekitei," rock garden arrangement, manifests itself in a unique purity. Years of work and a willingness to look closely at her surroundings as well as at the beauty of ancient cultures had been filtered through intellect and emotion to make a statement that was new and much appreciated by young artists at the time, such as Eleanor Moty (University of Wisconsin) and Robert Ebendorf (State University of New York at New Paltz), who found their way to her studio.

Miyé Matsukata had an infatuation with stone. She grew up with it and she respected it. From her mother's sixth floor apartment in Tokyo she could see the stone wall of the Nezu Art Museum on the south and the head stones of the Aoyama cemetery on the north. She admits conscious inspiration from her visits to the pyramids of Egypt, the amphitheater at Epidarus, the Mycenae grave sites, the Gorome valley in Turkey and Machu Picchu in Peru. Not only did she use a variety of chasing tools to achieve the texture of stone, but also she often literally lifted the quality of surface from the stone itself as the thin sheets of gold accurately registered a varied surface.

In the Haystack piece, light, hammered gold sheets imitate large stone forms. Diamonds representing small stones are set between the large. The Japanese call this type of stone wall "Gobo Mori." "Mori" meaning piled up and "Gobo" an edible brown vegetable root with a round stem.

This appreciation for stone was articulated and emphasized by her association with a knowledgeable and talented stonecutter James Hubbard, who eventually became her business manager and agent. Hubbard's exacting knowledge of stone as well as his sensitivity to its nature blended well with Matsukata's own reverence for the material. In a lecture entitled "The Legacy of Stone," she states:

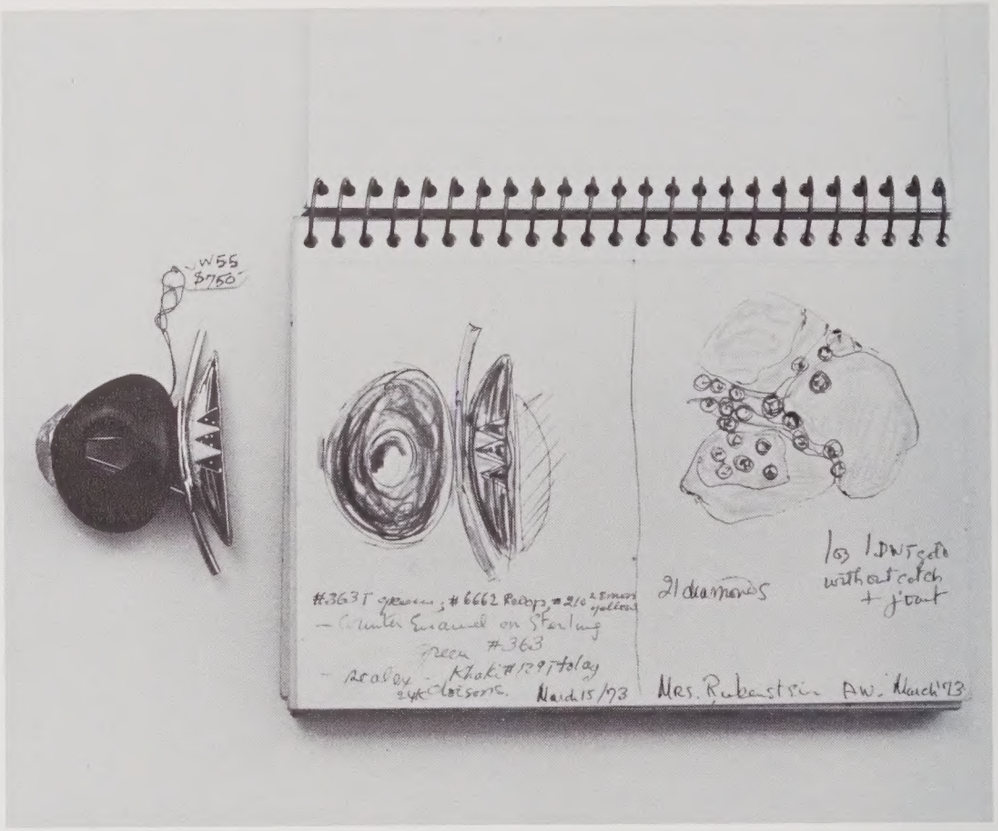
> "Stone has given me a rich legacy of TEXTURE, FORM, COLOR and COMPOSITION.
> . . . If texture represents character of surface as distinct from form and color, then my pieces borrow some textural elements direct from the stone itself.
> . . . The stone-like rough surfaces, I use in patches of pure gold have become the trademark of my Atelier Janiyé."

She showed a reverence for the knowledge and sensitivity of the stonemason:

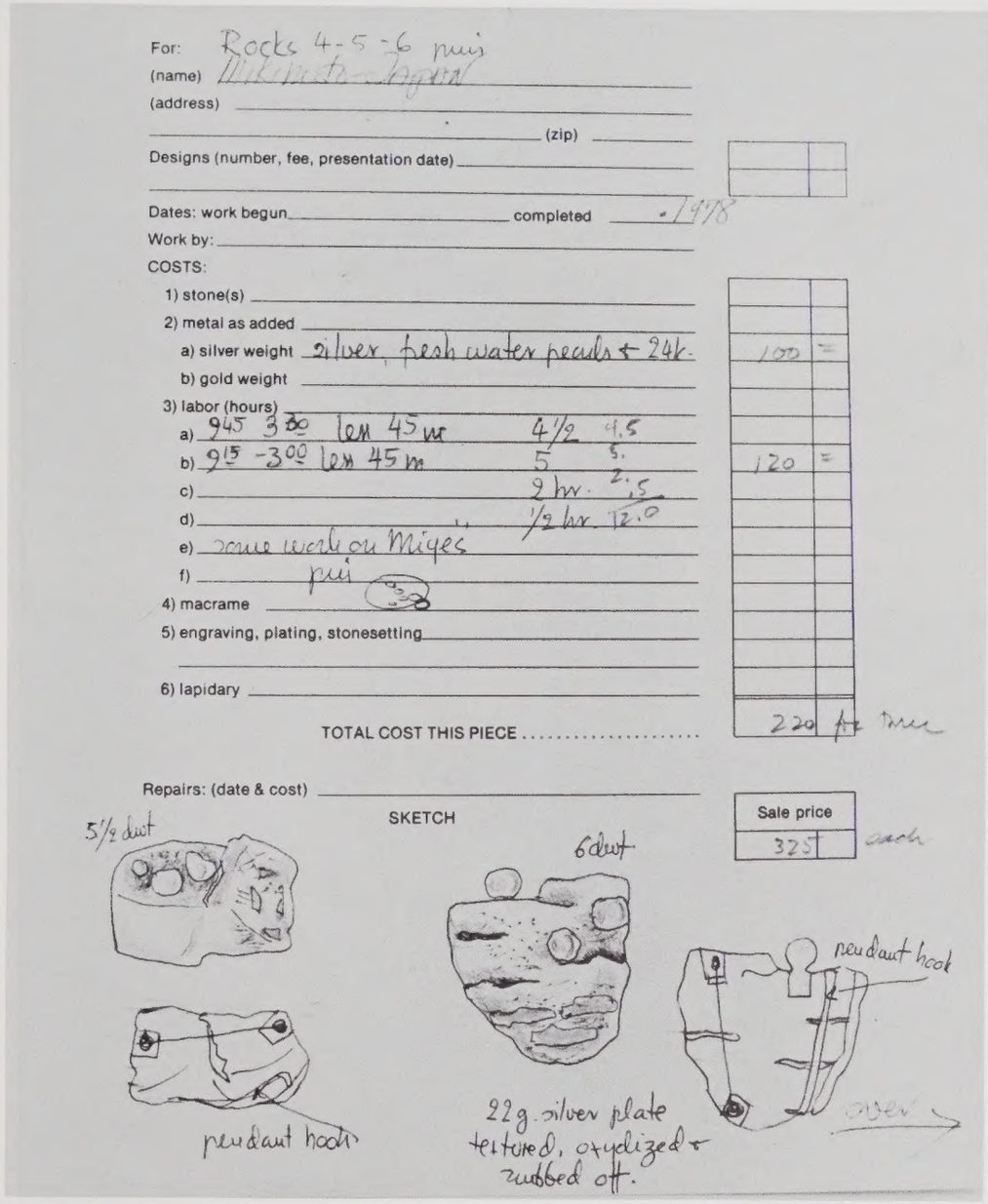
> "Standing in front of a teacher such as this stone wall, I see how one shape is balanced upon another . . . . Now shaping and fitting each piece are what I do as I build a ring from the ground up."

Miyé often referred to her pieces as painting-sculptures. She explains:

> "The idea emerges first as a two-dimensional sketch. But when they are made, or constructed,



Top: Photo of a page of Miyé's very numerous sketch books juxtaposed with the resulting piece—Miyé's sketches and the finished piece were often close; the black stone was cut by James Hubbard. Photo: Robert Cardinale; **above:** Miyé, Olaf Skoogfors (center) and Stanley Lechtzin at Odakyu Department Store, Tokyo, 1968



One of Miyé's record sheets with specific notes on weight, stones and material; this detailed recordkeeping seems to have been insisted upon by James Hubbard, Miyé's business manager and stonecutter. Photo: Robert Cardinale

> I have to decide how the line reads into a three-dimensional expression which encases space and catches light on an uneven surface. This is sculpture."

Matsukata also explored enamel both in rings and in a series of large gorgets. She makes mention of studying briefly with the noted enamelist William Harper (Florida State University at Tallahassee), although she added that she followed none of the rules of enameling. The gorget pieces, which, although somewhat coarse in technique and color control, possess a powerful statement. She recorded in some 12 pieces the impressions of her beloved Boston throughout the seasons, taken from dozens of slides and sketches of the city she made at various times and lights.

The enamel neckpieces set the stage for works of much larger scale. In her work of the early 1980s, Miyé was moving in the direction of more monumentality by using large stones—many cut by Hubbard—or large single pieces of metal, and even framed pieces of antique Chinese silk brocade. She also made good use of her love of fiber techniques and the tutelage of Arline Fisch, in her large "crocheted" neckpieces. Her study with Fisch took place while Arline was teaching at Boston University in the mid-1970s. The pieces display a loose handling of the fine silver wire and avoid rigorous woven metal patterns. The necklaces themselves are 20 to 24 inches in length, with some sections nearly one inch in diameter. Fresh water pearls, stone or ancient glass beads and even patches of silk thread are sewn spontaneously into them.

Both the enamel and the fiber techniques freed Miyé from the rigorous training she had undergone with Sharrock at the Boston Museum School. She was finally able to work without the rigor demanded of totally fabricated pieces, and more importantly, she was able to literally grab swatches of color and boldly lay them onto or collage them into her work. The pieces have great vitality and courage of form and color. Some pieces actually became clothing forms such as full collars, using more cloth than metal in the composition.

While Miyé was not an academic, she did teach several sessions at Haystack Mountain School of Crafts in Deer Isle, Maine, as well as participating in early meetings and exhibitions of the Society of North American Goldsmiths. She also employed, taught and shared ideas with a number of fine Boston-area artists: Babro Ulander, Yoshiko Yamamoto (Boston Museum School), Alexandra Solowij Watkins and Nancy W. Michel. Watkins and Michel continue to operate Atelier Janiyé in Boston and to produce work in the spirit of Matsukata as well as their own fine pieces.

Her personal impact is most clearly felt in Boston, and the hundreds of pieces she produced are beginning to find their way into major museum collections. The legacy she left is related to her rich and unique interpretation of the Japanese esthetic, most importantly revealed in the reverent ways in which she used nonprecious stones, coins, fabric and even beach glass in her painting-sculptures. Her commitment to placing idea and the richly textured lessons of stone ahead of her desire to sell has handed on to us a bold and vital legacy in a body of work that manifests the same powerful qualities of the massive stone monuments so admired by this gentle woman.

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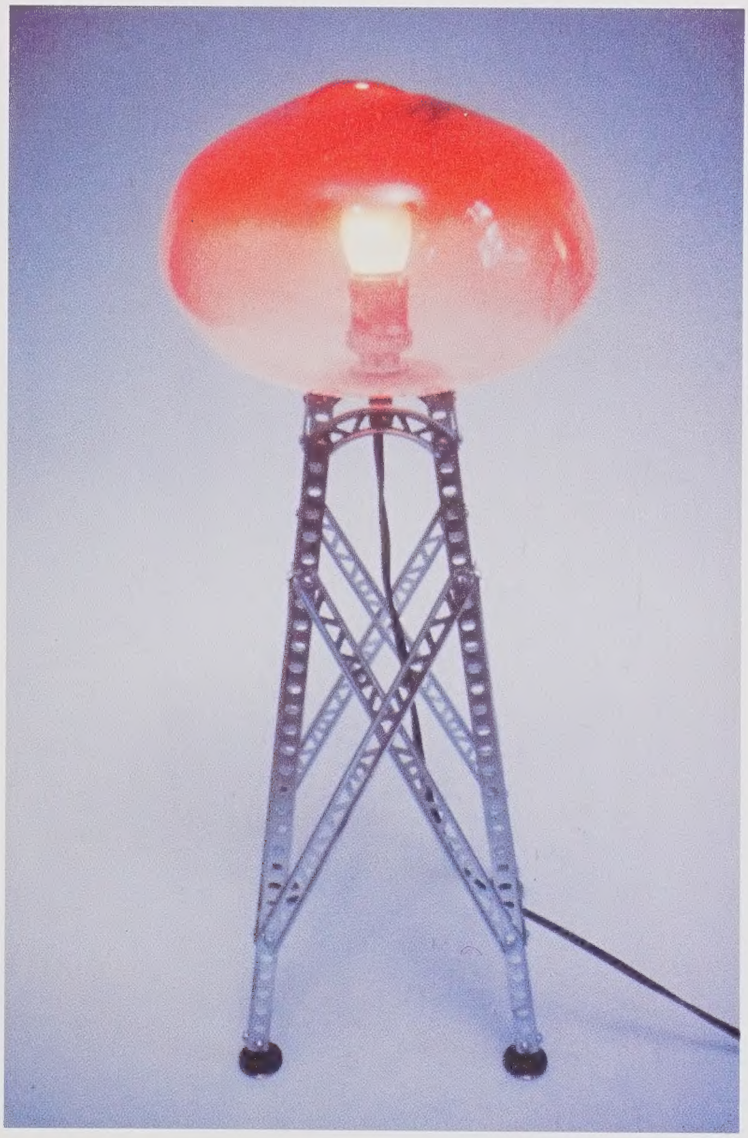
A special note of appreciation and gratitude goes to Mrs. Ann Gaddis, the sister of the late James Hubbard, for making the many photos, sketches and notes available for this article. Without her generous cooperation, the sharing of the work of Miyé Matsukata would not have been possible.

Robert L. Cardinale, former Director of the Program in Artisanry at Boston University (now at Swain School of Design), was named President of the San Antonio Art Institute in San Antonio, TX, in January of 1986.

THE ART AND INDUSTRY OF METAL FURNITURE

by Akiko Busch

In recent years, the design of furniture has invited experimentation by practitioners in a wide range of artistic disciplines. While a handful of architects has always designed the furniture and furnishings for their buildings, the practice is now far more widespread. Since 1981, *Progressive Architecture* magazine, by default the most forward-looking journal of the profession, has sponsored a furniture competition that has distinguished itself chiefly by trying to espouse the notion that product design is both an area of serious research for architects as well as an escape route for their more conceptual fancies. Sculptors, also, have found furniture a logical extension of their work. The kinetic, and often anthropomorphic, movements of Harry Anderson's sculptures translate easily to lamps; likewise, the granite and stone shapes of Scott Burton make for solid seating. And painters previously known for their expressions on canvas have been applying them now to furniture; and the painted, laminated and lacquered pieces that have emerged from their studios have also interjected color and wit into the furniture industry. Unlike the furniture of earlier periods, which had been painted largely for the purposes of obscuring poor craftsmanship or inferior materials, contemporary painted furniture blatantly celebrates the decorated surface for its own ornamental value.



Opposite page: Peter Handler, *Game Table,* anodized aluminum, glass, 36″ d., 30″ h. Photo: George Tate; **above**: Harry Anderson's anthropomorphic lamps stand, strut and stumble across any space they inhabit. Constructed from a wide variety of found materials, they are testimony to the fact that the metalsmith's materials need not be confined to metals—wood, glass, plastics and even fabrics all contribute to the structure and surface of his contructions

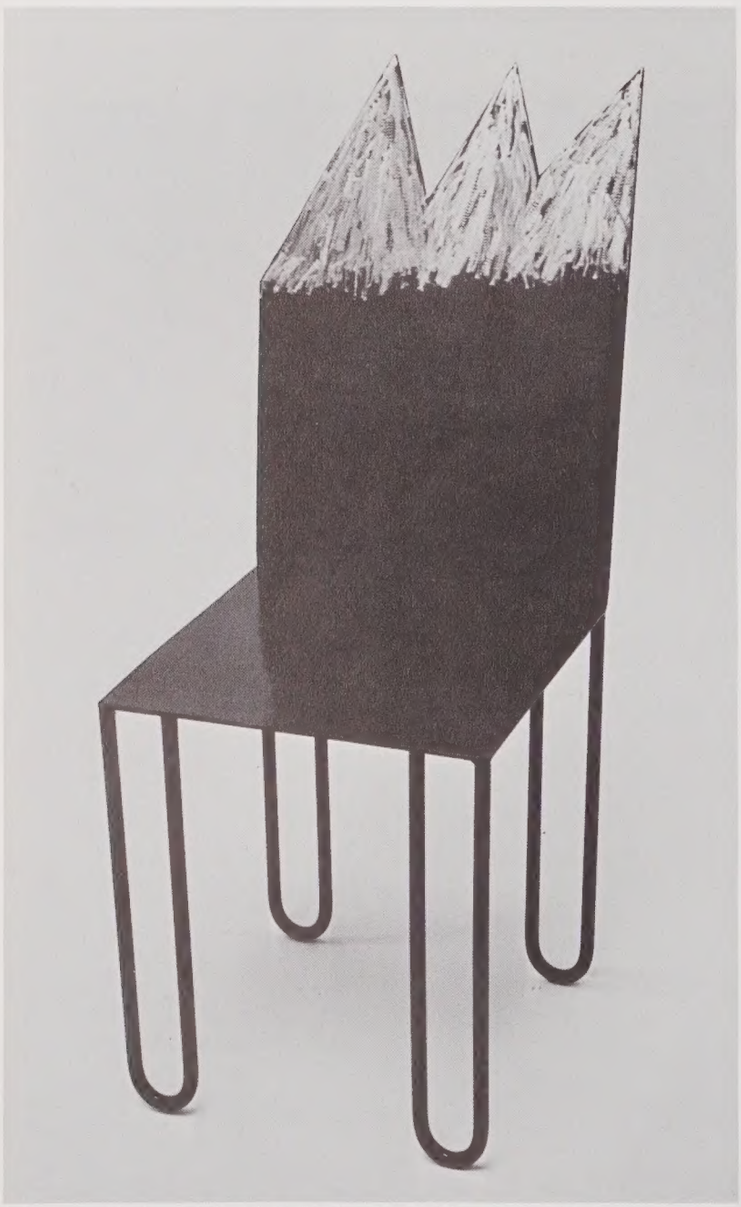
The play on traditional boundaries of art, craft and design has not been lost on metalsmiths. By the very nature of their work, they are both a step ahead of other artists and craftsmen, and perhaps a step behind. To begin with, metalsmiths have always had to address questions of body orientation. Questions of how jewelry fits the body and accommodates its movements are essential to the design of wearable pieces: likewise, how a chalice fits the hand concerns many holloware makers. The vagaries of human form and movement are not news to metalsmiths, as they often seem to be for artists whose furniture is clearly to be looked at only.

On the other hand, metalsmithing has also tended to encourage a myopic sort of vision. Both its precious materials and small scale encourage an intensity and concentration that in the end may work to narrow the craftsman's focus. While benefitting the minute technical details of a single piece, such a focus may also be acquired at the expense of the larger ideas that are inevitably behind a serious or complete body of work. That the broad investigations evident in other crafts may come with greater difficulty to the metalsmith, however, is what makes them all the more welcome. And, once the metalsmith *has* looked beyond the traditional confines of his medium to the areas of furniture and furnishings, the characteristic scrupulous attention to detail is clearly welcome.

Heretofore, metal furniture has largely been a product of industry; the use of steel or aluminum as a material has been predicated by the industrial techniques that make their fabrication economic rather than by the visual rewards of detailed handwork in metals that comes with the craft process. When the architect Marcel Breuer was inspired by his bicycle to bend steel for furniture, the furniture industry eagerly responded. Indeed, the volumes of undistinguished chairs subsequently constructed of several pieces of steel tubing and a wad of polyfoam upholstery might have been enough to make the architect think twice before making his contribution to the furniture industry. Steel and chrome tubing abounds on the furniture market today, but not for the concise lines and other esthetic properties it might promote, but for its ease of production and durability.

The metal furniture, however, that has been emerging from the studios of contemporary metalsmiths, has a different set of concerns. Consider the aluminum tubing used by metalsmith Peter Handler for the legs of a collection of tables. Handler addresses both substance and surface of his material. While the anodized aluminum legs rest solidly on the ground, a calligraphy of shapes and gestures floats on their surfaces, conveying a slightly contradictory lightness. Likewise, other strips of aluminum appear to float and wrap around the legs, attaching them. The play with weight and weightlessness, by nature of the material, is more in the metalsmith's domain than in the woodworker's or ceramist's, and it is one keenly appreciated in Handler's work. Coupled with his attentiveness to surface decoration, the tables are a significant departure from conventional uses of metal tubing.

Peter Handler is a metalsmith, and the refinement in the detail of his work clearly reflects his background in jewelry. "There's a certain kind of thinking you do as a jeweler," he explains. "The first thing any jeweler does when he looks at someone else's work is to look at the back. You pay attention to every small hidden detail. When you work that small, everything shows." Handler also points out that metalsmiths are more prone than other craftsmen to be flexible in their use of material. Woodworkers for the most part construct with wood, ceramists with clay, glassblowers with glass. Metalsmiths, on the other hand, by the nature of their profession, are offered a wider range of precious and nonprecious materials; a single piece may use sterling, glass, stones,



Left: Howard Meister's *Johnny's Girl* has been carved from steel and finished in high-gloss black enamel. Form and finish distinguish Meister's pieces, rather than fine-tuned craftsmanship and construction. Still, his provocative pieces do not belie the fact that he "designs furniture backwards," determining first what the piece will look like, and *then* determining materials; **right**: Forrest Meyer's *Altar Table* has a solid stainless steel top, which is juxtaposed in both color and texture to the anodized aluminum legs. Meyers exploits the texture and color of metals for their own decorative value, rather than applying a surplus surface decoration. Photos: courtesy Art et Industrie

aluminum, found objects. And this freedom with material is clearly something that will find applications in furniture and furnishings.

Although Handler now constructs furnishings only, the choice was made only after 10 years of working as a professional jeweler. "Good art is dated," he says. "It should speak for its own time. I would like people looking at my work in the future to know what period it stood for." Handler's first jewelry had been what he describes as "the mid-70s funk esthetic." His next jewelry series, however, reflected technology, the imagery suggesting a "humanized techology." This work was often made in aluminum and machined; an early series of pins were graphic constructions of aluminum and epoxy resin. When a designer suggested to Handler that the painterly surfaces might work as tabletops, Handler was intrigued and began to experiment with scale, where he has since stayed.

What especially appeals to Handler about the larger scale are the opportunities to do more constructivist, sculptural work. Not only does the larger size nurture innovation, but also the opportunity is afforded to explore spatial constructions that are clearly more limited in a two-inch brooch. That these constructions display a meticulous eye for detail and a flexibility in material, however, are vestiges of their origins in jewelry.

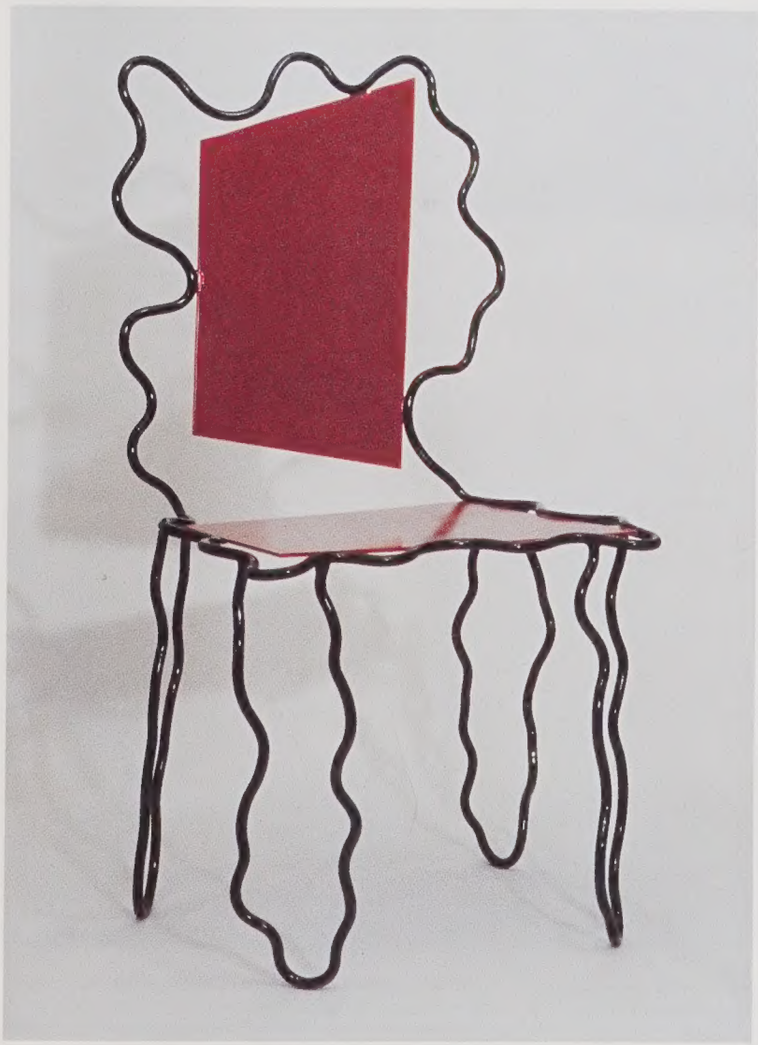
Louis Mueller, came to his design of lamps by a similar, though less direct route. Originally a silversmith, Mueller turned to sculpture in the mid-70s in an effort to move from "a recognizable subject to a more personal, conceptual understanding of forms involved." When, in 1981, he designed and constructed two lamps in brass, silver-soldered, with blown glass shades for his own use, he returned to the design of the utilitarian object. Mueller points out that these two areas provide a balance: While the lamps are technically more difficult to produce, the sculpture is more philosophically demanding. Yet the technical refinement of the first benefits the second, while the more cognitive investigations made by the sculpture are reflected in the esthetics of the lamps. And both, he adds, use the skills he developed as a metalsmith, the soldering, the fabrication, the same attention to detail and craft.

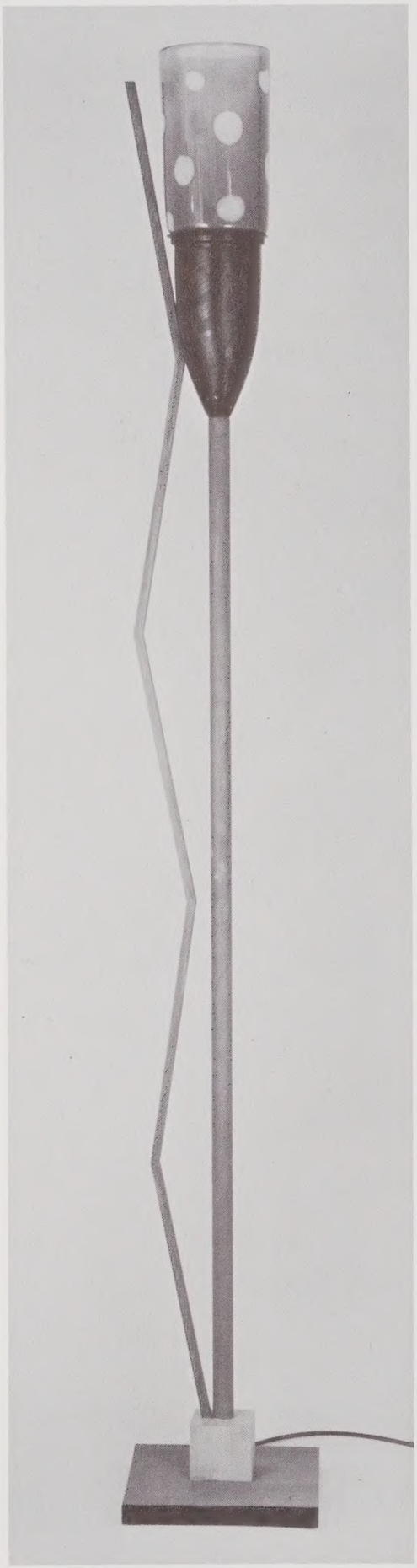
"Jewelry has to do with restraint," says Mueller. "What you don't put in is as important, if not more so, than what you do put in. Often what isn't there is what you appreciate most. I believe in reduction." And this reductive sense of design is apparent in Mueller's early jewelry, his sculpture and his lamps. Yet it is not only the consistency that is apparent, but how this reductive esthetic is examined and applied differently in the three mediums. The sculpture has a presence of its own; often it goes so far as to be surrounded by a metal railing or bar that separates it from the viewer. There is nothing superfluous in its austere forms. Nor is there superfluity in the lamps. These, however, are accessible, approachable, humerous and often anthropomorphic in their tilted, propped, leaning stances.

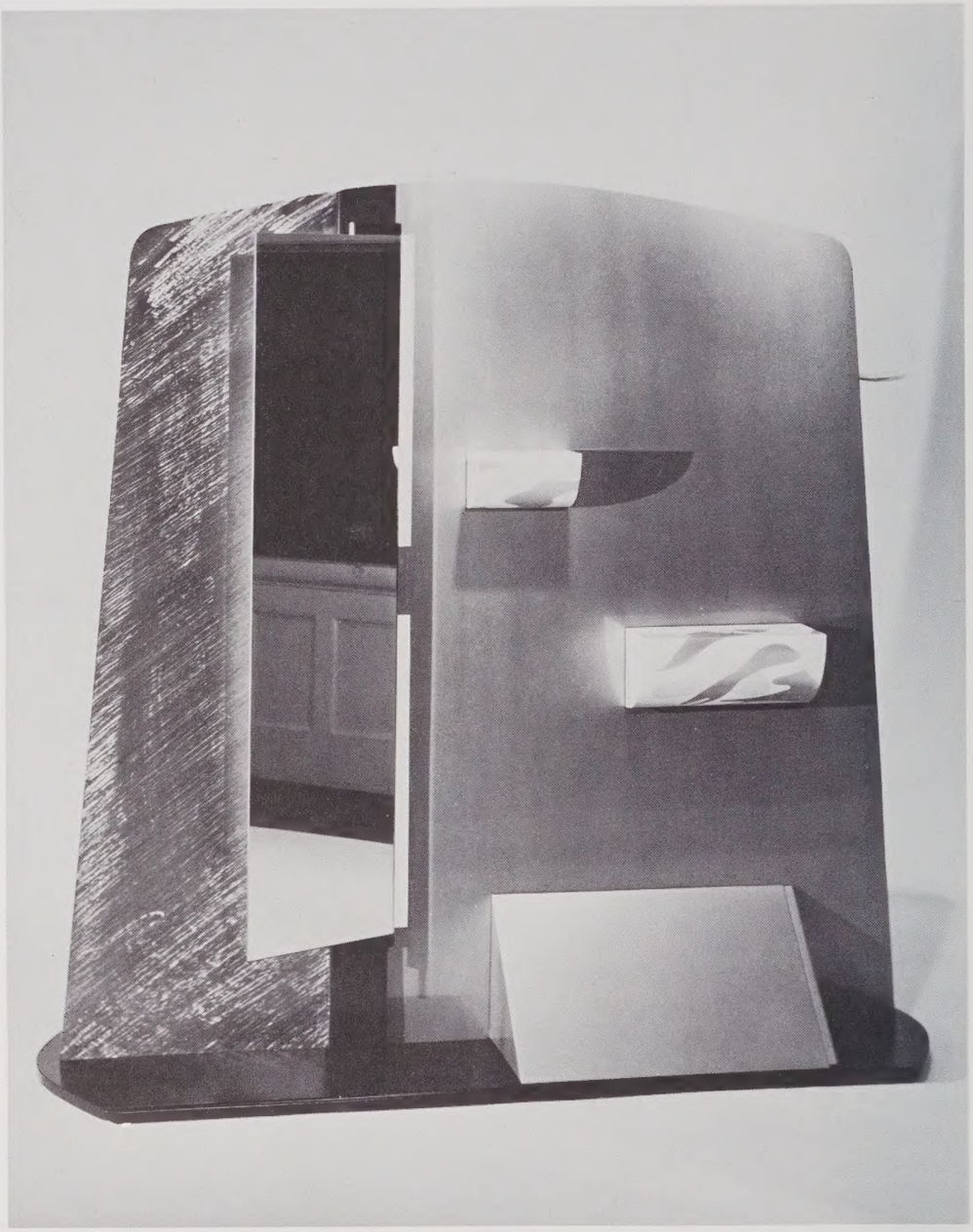
As a metals student of Mueller at Rhode Island School of Design, Todd Noe has also turned to lamps, but for more pragmatic reasons. "People liked the slick, lacquered finishes on my pieces," he explains, "but nobody bought the sculpture, so I tried to think of something else I could do applying the same esthetic." Because finish and color are Noe's focus,

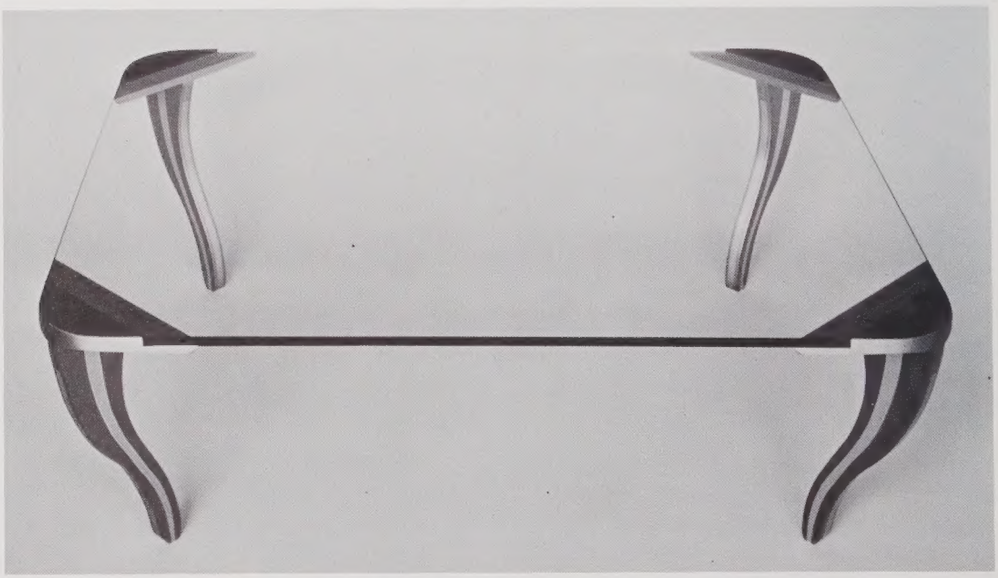
Left: Peter Handler, *Table Lamp,* anodized aluminum, 19" h.; **right:** Todd Noe, *Wanderlust,* wood, metal, paper, mechanics, 9 × 8 × 8"

Above: Elizabeth Jackson's lacquered and painted aluminum wall shelves may not tell which way the wind blows, but like their folk art predecessors, weathervanes, they convey a sense of movement, swerving abruptly into and out of the space they occupy. Cut from aluminum plates, their sharp edges work visually with an aluminum chair and hooked rug, also by Jackson. Photo: courtesy Art et Industrie; **opposite page, clockwise from top left:** Louis Mueller, *Lamp,* bronze, oil paint, glass shade by Dale Chihuly, 27″ h., 1983; Todd Noe, *Lamp,* wood, metal, paint, glass, 29″ h., 1984; Forrest Meyers, *Fold Chair,* one-piece ¼″ anodized aluminum ; Howard Meister, *P. Strut* chair, steel rod, enameled steel plate









Left: Louis Mueller, *Floor Lamp,* steel, paint, glass; **top**: approximately named *Division,* this piece by James Hong is a room divider with a mirror; built on a plastic laminate base, the divider itself is lacquer and ground steel. The wood and steel shelves are attached to the divider magnetically, rather than being permanently fixed. Photo: courtesy Art et Industrie; **above**: Peter Handler, *Coffee Table,* anodized aluminum, glass

he uses metals that can be easily painted; colored brass and copper stalks support the fan of the shade in a play with form that is nurtured by the sculpture. Like Mueller, Noe turns to lamps as a design exercise that further develops the innovations found in the sculpture.

The slick finishes of Noe's pieces do not immediately identify their material as metal. Howard Meister, on the other hand, uses steel purely for its structural advantages, and the material and construction of his pieces are immediately apparent. And, ironically, it is Meister who does not come from a metalsmithing background. On some levels, the pieces reflect this; on others, they don't at all. Before designing furniture, Meister studied music, still photography, the Classics. And when he turned to furniture design, he explains, he simply started designing backwards. "I decided what it was going to look like first. Then I decided what materials it should be constructed in. The important thing to me was how it looked, the poetry of it." Meister's steel pieces are constructed with the most basic cutting and welding techniques, and perhaps for this reason—though he does do the work himself—he does not consider himself a craftsman. The pieces lack the detail in construction that is so evident in most pieces made by trained metalsmiths; they are not finely crafted, nor do they pretend to be. Yet they make the same inquiries into a contemporary esthetic as Handler's pieces; and though the answers they find are radically different, they too "speak for their own time." Meister's high-gloss-enamel polished surfaces that have been brutally cracked, severed or otherwise broken reflect an esthetic that could be of no other design period. And his use of material purely for its structural value—rather than simply for its visual properties—has a certain integrity that is a part of the craft process.

Forrest Myers is a metal sculptor whose training was not as a jeweler, but "more on the industrial side." Myers worked in a small metals fabrication plant where he learned to cut, weld and fabricate metals. "I now do most of the work on the pieces myself and consider myself a metals craftsman," he says, and his steel, stainless steel, copper, brass and aluminum furniture endorses his statement. Myers's pieces explore and exploit metal finishes. While it may be the combination and juxtaposition of different colors and textures that first draw the eye to his pieces, color is not used as surface decoration but as a statement of the material. Myers uses metals almost as a pictorial, rather than structural, device. Nevertheless, what the metal will do, the lusters it will take on, the surface textures it can achieve all predicate its use. While details of construction are clearly secondary in his work, this dedication to material is enough to qualify him as a craftsman.

The precise edges of Elizabeth Jackson's painted aluminum pieces are similar to those found in the work of Myers and Meister. The tapered shelves seem to emerge suddenly and spontaneously from the wall's surface, and both the pieces and the shadows they cast convey a sense of rapid movement. Through these pieces and the hooked rug that was made in conjunction with them, Jackson is continuing traditional folk art. "The shelves and chair have been cut out of metal," she explains, "like old weathervanes, and the hooked rug uses another folk art, though in a more contemporary way." Jackson works with a blacksmith for the furniture; after she has made cardboard mockups, she works with him in cutting, folding, bending, in a process she finds akin to origami. Jackson's own background is as a sculptor, and her pieces reflect a contemporary esthetic. She is nevertheless quick to acknowledge the folk art traditions that her work relies upon and continues.

Her work, more than any other here, illustrates the cross exchange that so informs contemporary crafts. Her images are cross-referenced in metal *and* textiles; contemporary, they nevertheless recognize their folk art origins. That such a broad approach has found expression in a craft medium that by nature invites a more concentrated and narrow focus, is invigorating and encouraging.

Like Jackson, Karl Bungerz works in a variety of different materials. His tendency, however, is to combine them in a single piece. The *Conversation* table, constructed of hollow welded steel and bird's eye maple, juxtaposes color, material, surface texture. Yet their precise fit belittles these differences, stressing instead the compatibility not only of materials but also of craft mediums. That woodworking and metalsmithing can dovetail so gracefully is a lesson valuable to practitioners of both.

In the end, this spirit of compatibility is the most endearing quality of this furniture: the compatibility of a jewelers' exacting approach with furniture construction; the compatibility of sculptural considerations of form to utilitarian objects; and the compatibility of traditional folk art to sculpture. That many of these most eloquent inquiries are being made in metal points out the possibilities for other jewelers looking to expand the scope and scale of their work. More to the point, though, is that these pieces suggest that the distance between processes of art, craft and design is often imperceptibly narrow. As it narrows more, perhaps the tendency to assign categories such as "art furniture" or "craft object"—when what is being described is a chair—will diminish. Already vague, such terms serve only to further compartmentalize a design sensibility whose chief aim is to integrate. That such integration is possible and often, successful, is apparent in the work shown here.

Akiko Busch is a freelance writer and frequent contributor to Metalsmith.

Left: Peter Handler, *TV & VCR Table,* anodized aluminum and glass; **right**: Louis Mueller, *Coffee Table,* bronze, glass, 17 × 30 × 30″, 1985

Yaw Gallery

Anthony Lent with Steven Parker, *The Close Set . . . Legs,*
18k gold, diamond, ruby, approx. 3″ h. The top unit is "invisibly set" and mounted "en tremblant" to the legs, which are fully articulated and flexible

This is a continuing series on galleries that specialize in jewelry and metalwork

by Myra T. Mimlitsch

The town of Birmingham, Michigan is an affluent suburb of Detroit. Aside from its beautiful houses, fine shops and theater, Birmingham is considered to be the visual arts center for the metropolitan area. Located in the neighboring township of Bloomfield Hills is Cranbrook Academy of Art, internationally renowned as an architectural masterpiece of the late Eliel Saarinen and for its excellent art program. Nancy Yaw is a native of this area, and it was here that she began her career as a gallery owner 24 years ago.

As a dealer, Yaw's involvement in the arts has taken many routes. Her business began as a fine arts gallery in Jacobsen's department store. The gallery's focus at that time was on the publishing and sales of European artists' prints, an endeavor Nancy Yaw shared with Jilles Abrioux, a private dealer in Chicago. Five years later, she and her husband leased space on a strip of storefronts where they established the Yaw Gallery.

Yaw conceived the notion of developing a gallery strip in Birmingham, and through her initiative and input this strip now houses seven of the finest galleries in the area. Often playfully referred to as a "culture gulch," this conglomerate of diverse galleries allows the public to park once and see seven entirely distinct bodies of work. The more noted galleries on this strip are: the Halsted Gallery—photography; the Donna Jacob Gallery—ancient art; Cantor-Lemberg—prints; and Xochipilli—avant-garde fine arts. The Yaw Gallery, now dealing exclusively in metals and furniture, has represented crafts for nearly 20 years.

In the late 60s and early 70s much energy was focused on the crafts, clay in particular. Peter Voulkos and others broke the boundaries of function and brought clay out of the realm of pottery, using it as a medium of expression. Interest in glass was also on the rise. Harvey Littleton, seen as the father of the studio glass movement, opened the doors for glass, as his students set up satellite programs for glass across the country. Yaw was moved by the excitement surrounding the crafts, and it seemed inevitable that she would eventually devote her business to them.

In 1968 Yaw's commitment to crafts was assured. Having been encouraged by Richard DeVore and Robert Kidd (at that time chairmen of Cranbrook's ceramics and fibers departments respectively), she mounted two major shows at the gallery: "Pillow as Concept" and "Clay: Anatomic and Geographic." The artists' excitement and the public's enthusiasm for these shows were factors that confirmed Yaw's decision to deal in crafts exclusively. The gallery then concentrated on shows of clay and glass, featuring such artists as Richard DeVore, Wayne Higby, Ron Nagle and Peter Voulkos in clay; Marvin Lipofsky and Dale Chihuly in glass. These two areas and a small amount of metalwork were the gallery's main interests for almost a decade.

In 1979 Yaw met Gerhardt Knodel, Fibers Artist-in-Residence at Cranbrook and a leading figure in fibers today. Through his influence she became fascinated with historic textiles and learned of the importance of textiles to culture and religion. For the next four years the gallery sold Indonesian, Pre-Columbian and Coptic fiberworks.

After this came a break in Yaw's gallery career during which she pursued other business interests. When she returned to the gallery in 1984, she again pondered which direction the gallery should go. Yaw was aware of the innovative work in the jewelry field and was particularly inspired by the "Jewelry U.S.A." show, which she saw in New York City. New attitudes toward metal, fashion and body ornamentation were exposed through this exhibition, and she envisioned great potential in bringing this work into the Midwest. Yaw contacted Bob Ebendorf, William Harper, Mary Lee Hu and Jim Meyer and shared her ideas about this possible direction. With their help and encouragement, she began to concentrate solely on metals and furniture, a field in which she also saw new promise and fresh ideas.

In this past year of exhibitions, the Yaw Gallery has fully illustrated the rich diversity in the field of jewelry. Yaw's main concern is to represent a variety of distinct approaches to jewelry. The gallery shows the work of Tony Lent and Debra Healy, jewelers who adhere to the traditional use of precious materials. A recent show of William Harper's *Saints and Sinners* series exemplified the use of a jewelry format for the creative elaboration of a theme. Jewelry that revolves around fashion, such as David Tisdale's anodized aluminum bracelets and Douglas Ferguson's painted mesh neckpieces, are also represented here. Yaw is committed to displaying these areas of jewelry individually, as they are all important and valid aspects of the field.

The gallery also features many metalsmiths that are in the forefront of the academic world. Yaw feels that the work of such artists as Jamie Bennett, Bob Ebendorf, Arline Fisch, Gary Griffin, Mary Lee Hu and Helen Shirk is relevant not only as it pertains to metalsmithing today, but as a major influence on the students of these artists.

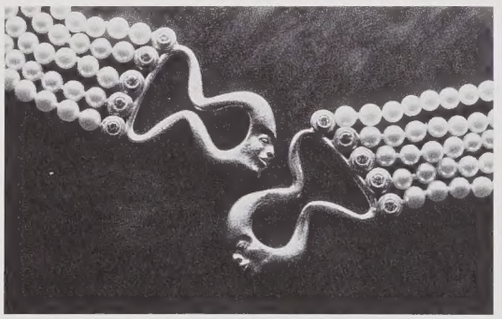
The gallery space is designed to inform the viewer and enhance the work, which it does beautifully. All of the jewelry is displayed below eye level, with generous space in each case. There are no distracting elements around the work, enabling the viewer to read it clearly and directly.

In addition to having a tastefully designed public display area, Yaw also accommodates the client with a private room in which to view particular pieces more intimately and to more comfortably discuss the work with Nancy Yaw or Lillian Zonars, her assistant. The problems of display that confront the gallery owner are many. The Yaw Gallery is constantly upgrading its presentation of work. Yaw's concern is that in simultaneously mounting such breadth and diversity of talent, each piece must remain distinct. She must always be sensitive to three factors: the client, the artist and the art. Lighting and background color as well as traffic patterns are important variables that any gallery must address; and a metals gallery is confronted with even more. The range in scale presents other difficulties, and security is a constant concern.

Yaw presently carries jewelry primarily; she does not show much holloware, because the space does not yet allow for its proper presentation. She feels that holloware should be displayed with an air of preciousness and should be safeguarded in an enclosed case; an open pedestal tends to diminish the sense of reverence that historically surrounds the presentation of holloware. Yaw is in the process of modifying the existing space to better accommodate this type of work.

The outstanding quality of the Yaw Gallery is the result of Yaw's diligence and attention to detail. Nothing stands between the viewer and the work. Nothing is shown that is generic or anonymous. Yaw studies the field and is aware of the issues in metalsmithing today. Her rapport with the clientele is warm and genuine and founded on her many years of experience here. The public visits the Yaw Gallery, knowing and expecting the standard of excellence that makes this gallery exclusive.

Myra T. Mimlitsch is a graduate student in the metal department at Cranbrook Academy of Art.



Anthony Lent, *A Double Fan Clasp,* 18k gold, diamond, pearls.

GETTING REPPED II

by Vanessa S. Lynn

This is the second of a two-part article on finding a jewelry representative.

Illustration by Seymour Chwast

The jeweler/rep relationship is a business partnership for the purpose of expanding sales and furthering careers.

Should You Sign a Contract?
The issue of a written contract is something of an anomaly. Very few artists have one, and yet all were vocal on the topic. Several said they would have seriously considered signing a contract, had it been presented to them. Others were in the process of drawing up their own. But most felt that solidifying a rep/jeweler relationship in writing was a very good idea. Unfortunately, no one approached was willing to provide a sample contract, all deeming the document to be too confidential. However, a fledgling organization called the Accessories Marketing Representatives Association plans to produce a standard contract for the industry. For more information, call Judith Feldman at (212) 683-1470.

A contract formalizes the fact that, in essence, the artist is engaging the rep to sell, and the rep is engaging the artist to manufacture. A good contract minimizes the aggravation of misunderstandings as the relationship unfolds. Ideally, it leaves no question as to which party holds responsibility.

The first items the document should cover are terms of finances and contract duration. The most standard rep's commission is 15% of the sales they generate. But a rep can ask for more, perhaps 18%, if they provide extra services, like billing, full collections and free trade shows. You can also offer them an extra percentage or two, in an effort to entice them to promote your work just a little harder. On the other hand, an artist with a following or reputation is in a position to possibly negotiate a lower commission rate. The lowest I encountered was 10%.

If you are negotiating a contract for the first time, it would be advantageous to seek the standard 15%. After six months, you will have enough data for renegotiation. If your line becomes a best seller, you will know it and will have the leverage to attempt to decrease the rep's share. However, you may decide not to tamper with the relationship due to its success. On the other hand, you may find your sales are not staggering, but they are acceptable, as is your relationship. In this situation, it could be worthwhile to offer your rep one or two incentive points, for a stipulated length of time. At the end of the period, you could compare your income for the two time frames to see whether or not the raise has contributed to increased sales.

Your Contract and Your Freedom. Remember that a contract is supposed to work to your advantage—to help you grow. To this end, you must pay attention to avoid inadvertent limitations. Areas already mentioned but worth repeating are your freedom to keep your house accounts and to do trade shows. With the latter, you will probably have to give your rep some partial commissions, but the experience and growth potential for you compensate.

You must also spell out your freedom vis-à-vis gallery shows and sales. Some artists continue to produce a separate, limited-edition production line, and/or one-of-a-kind pieces, for gallery outlets. Your rep has no right to a portion of your gallery sales, having had no involvement with that part of your business. Do not allow them to think otherwise.

Territories. This is a straightforward yet significant part of your contract. You want to define geographic areas for each member of your sales force. This is a good idea even if you currently have only one rep, because it will free you in the future to add new reps for specific territories not serviced by the first rep. Just keep in mind that inevitably there are some split commissions with multiple reps, and you have to administer them.

Since commission payment can get involved, a written contract can serve you well. One major area to clarify is house accounts. When you sign with a rep, you should itemize any accounts that you are currently serving. These are your house accounts, and generally a rep does not make commissions on your sales to them.

However, be forewarned that if your business grows as you hope, situations will inevitably arise where it is in your own best interest to split your house account commissions with your rep. For example, if your rep writes an order for your account while doing a trade show on your behalf, they deserve 50% of the commission. Likewise, if you are too busy designing and producing to service an existing account and your rep accommodates it, again, they are entitled to half the commission. The point is to make serving the client the real priority. A well-written contract clarifies these situations, which tend to multiply as business increases.

One artist found herself mediating a commission dispute when the buyer from a local sales office placed an order that was eventually shipped to a branch of the store in another rep's territory. The account needed attention, and neither rep wanted to handle it until they knew who would get the commission. The artist learned to write this situation into her contract, but she nearly lost a major account in the process.

Method of commission payment is also included in the contract. Two approaches are possible: 1) The rep does the billing, gets paid by the account and then pays the artist. 2) The artist does the billing, pays the rep: a) upon shipment to the account or b) upon payment from the account. Obviously, the last option puts you in the most control and is therefore preferable. It is also desirable to indicate terms of payment in a contract. Payment is usually expected (either to you or from you) within 60 days of receipt from the account. Some reps will ask for a monthly draw against their projected commission earnings. You have every right to object to such an arrangement, particularly when you have no idea what kind of sales figures to expect. This is something that can be negotiated into a later agreement, if necessary.

The other major area to be sure to include in a contract is its duration. Do not be pressured initially into anything long-term. Six months is a reasonable time frame for you and your rep to evaluate each other. At the end of that period you should be free to either continue or disassociate yourself from the union. Another way of handling the effective time period is through sales figures. You may be able to develop an arrangement specifying that if the rep does not write a certain amount of

sales within a certain period of time, the contract is null and void.

Credit Checks and Collections. This is a topic fraught with confusion. Most reps interviewed did not do credit checks on new accounts, but most artists listed it as a rep responsibility. The point, then, is to know at the outset whether your rep provides the service. If not, it is imperative that you handle it yourself. Further, even if you get a reasonably favorable report on a new account, it is always a good idea to ship the first order C.O.D.

There are at least two professional services that provide credit checks for a fee: Dun and Bradstreet and the Credit Exchange, Inc. Because the latter specializes in apparel (which includes giftware and boutique and hence, jewelry), it is the one most applicable to the small jewelry business. The main office is at 229 West 36th Street in New York City; telephone (212) 760-6000, with branches in Los Angeles, Chicago, Philadelphia and Miami. A small business becomes a subscriber for a yearly fee, which is negotiated on the basis of how many credit checks one requests in a given year (from 150 to 5,000). Once you are a member, a telephone call puts you in touch with an operator who puts your request into the master data base. You receive your response immediately, with follow-up corroboration by mail, within a week. Further information may be obtained from Ruth Moss.

As for collecting on delinquent accounts, most reps interviewed felt it was up to the artist to initiate the procedure but did feel an obligation to assist. Very often, reps can be more successful in collecting because they have established a personal rapport with the individual at fault. In any case, given the way most contracts are written, reps don't earn their commission if you don't get paid, which tends to provide incentive.

Additional Monies. Before you sign a contract, it is important to know just which services are included in the commission and which will be at additional cost.

Most reps do not pay you for your sample line, unless it involves precious materials. Then, they may pay cost. Some reps will sell the samples at the end of the season; some will just return them. Know your rep's policy.

At least one rep I spoke to, who maintained an urban showroom, divided the rent between herself and all the artists she carried. It seemed an unusual arrangement, but her artists were obviously satisfied with the results. More commonly, a rep will split trade show costs—where transportation, shipping, space, electricity and set-up costs alone can run $2,000—among the artists shown. Once again, artists interviewed who contributed to these expenses seemed amenable, based on the benefits accrued to them.

Some reps who advertise expect artists to share costs. Find out how your rep handles this. Additional costs may be involved if your rep negotiates a position in a mail order catalog for you. Policies here vary extensively, but sometimes there is a fee for "the right" to be offered through a particular mail retailer. Catalog selling can be complex, but the sales potential is phenomenal. There are many ways they can be handled. Sometimes there is no fee, or the rep will pay the fee, or split it with you, or even negotiate a waiver. Since each case is unique, specific terms are not usually included in the initial document. But it would be advisable to include a clause to mention that terms of catalog sales (when and if applicable) will be covered by a separate contract.

Finally, and most importantly, don't sign anything until it has been perused and approved by an attorney and until you understand every paragraph totally.

Watch Out

What remains to be shared are some of those individual experiences that made artists glower when they were first approached to provide assistance with this article—the so-called "horror stories of the biz." They aren't that terrible—some are simply part of the risk of going into business and were, unfortunately, difficult to foresee. Others might have been avoided if the artist had been more cautious, or more informed.

The first thing to remember is that it may not be that easy to form a relationship with a rep that's good for you. There will probably be unanswered correspondence and phone calls—the whole frustrating gamut of potential rejection. Generally, a salesperson's first priorities are sales—not more merchandise. So you, as an unknown entity, are not at the top of the list. Remember that this annoying initiation rite will probably occur several times, since it usually takes a while to "mesh" with your first rep. So, steel yourself for a potentially arduous process.

After the trial of connecting with the rep has resulted in an agreement, acceptance and increased sales are still far from assured. Let's look at potential scenarios: There is that most dreaded of situations when the rep finally agrees to take your sample line but doesn't sell it. There can be any number of reasons why: the rep may have misjudged the market; the rep may have taken it to keep it out of the territory; or the line may have gotten lost in the shuffle. Occasionally, even the established artist can encounter the "no order" syndrome. Reps have been known to take on a line with a quality reputation, even though it is actually too expensive or too sophisticated for their established clientele. The rep carries it simply for "image," never really expecting to write orders on it. The net result of all this, of course, is that you are geared up, with no orders to fill—an infuriating and painful experience. The best way to protect against this situation is by researching the rep and making sure you have seen all the lines they handle. This will help you determine whether the rep has a market for your work. A note in your contract guaranteeing that you have seen all the lines signed on before yours is also wise insurance.

A reprehensible situation begins similarly to those above, but it has an added twist. Not only do you get no orders, but you get no samples back when requested. This can be the result of gross inefficiency or it can be your first indication that the rep may be trying to rip off your line. This is obviously no sure indication, and you must be very cautious about any serious accusations, but reps have been known to take on lines and then try to get them priced out more cheaply for production. Reps have even been known to return pieces of fine jewelry with vestiges of casting wax. Theft of designs is perhaps the greatest fear of production jewelers; justifiably, since it does happen. Even if your contract clearly specifies that you own the rights to your designs, you are not well protected, since even a miniscule design change is interpreted by the copyright law as a "new and different" design. The best insurance against the potential lawsuit headaches, and the tragedy, is to do everything you can to make sure your rep is reputable.

As far as approaches from reps, it is wise to be wary of those who proffer a hard sell. Most good reps have a full roster. Anyone who makes unreasonable promises should be considered with caution. Also, be cautious of reps who approach you surreptitiously at shows, or who are reluctant to give you names of artists and stores they work with. Such evasiveness can be indicative of several things, none of them are good. In particular, these types are sometimes interested in buying small quantities of your work wholesale, so that they can retail it to their friends. Another variation on this theme is the rep who sold an artist's work wholesale to a couple. They, in turn, took the work on the road to small craft fairs, claiming it as their own. The artist just happened to attend the event and uncovered the scam.

Going into business with an unfamiliar person is always a risk. You cannot totally insulate yourself against problems. For example, a rep with a long-term showroom in a major Southern city took samples, left town and bounced checks all along the way. As it happens, the artist who got burned assumed that the rep's urban visibility was sufficient indication of stability. After the damage was done, she found out that she probably would have avoided the whole relationship if she had spoken to other artists.

In conducting interviews for this article, 20 out of 20 participants asserted the importance of a positive personal rapport between partners in this relationship. But observe this corollary: The jeweler/rep relationship is a business partnership for the purpose of expanding sales and furthering careers. You must carefully evaluate the background, financial stability and fiscal integrity of your candidate and assess the viability of the contract. A rep must be more than concerned, supportive and spiritually attuned to your work: the rep should, above all, be able to translate the relationship's positive feelings into substantial sales. As Humphrey Bogart said at the finale of *Casablanca*, "*This* could be the beginning of a beautiful friendship."

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Reviews

Past Instructors: Jewelry, Silversmithing, Enameling
Wichita Art Association, Wichita, KS
January 20–February 17, 1985
by Leslie Lyndon

The Wichita Art Association was formed in 1920 by a group of culturally minded citizens to offer to the region first-class exhibits and education. Sixty-five years later, the Association still flourishes and grows within the realm of its original intent.

In the formative years, a jewelry and silversmithing department was established by Margret Craver, who was later to become known for her outstanding work at Handy & Harman and the coordination of silversmithing symposia. Through the "Founding Fathers Conference" at the Smithsonian in 1983, much was learned of these early influences on the scholastic approach to metal and Craver's monumental efforts for the industry.

After Craver left Wichita and the Wichita Art Association, many outstanding instructors have expounded their theories (and pounded their metals) giving this institution a prestigious history. After 65 years, the exhibitions committee decided it was time to have an in-depth look at these jewelers and enamelists. Three pieces of Margret Craver's jewelry were exhibited: a graceful 18k yellow gold brooch set with turquoise, a sterling silver bracelet with fine wire tracery patterning and a citrine and sterling ring. These pieces were drawn from the Association's permanent collection. The second instructor at the Association (who also attended Handy & Harman conferences) was Gunda Lee Cornell. Her work was represented by two sterling silver goblets and a necklace.

Along with the jewelers and silversmiths, enamelists have played an important role in the department. The first enamelist of note was Margaret Seeler. She came directly from Germany to the Wichita Art Association, where she developed as a leading American enamelist. Her influence in the late 40s and 50s can still be seen in the work of her former students. Seeler had numerous pieces on display.

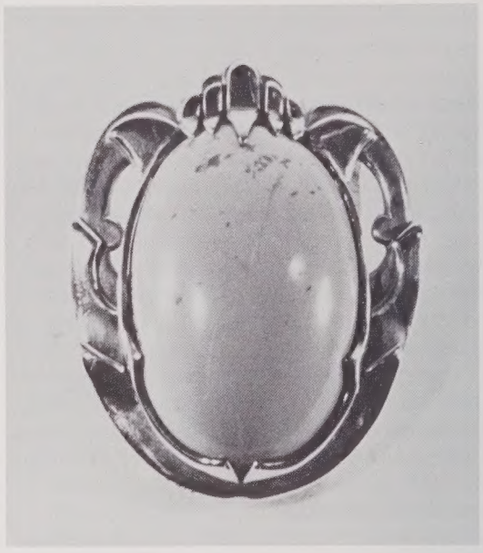
Following Seeler came Rudolph E. Brom, a Dutch silversmith and enamelist. Brom is best known for the ceremonial sword presented by the Queen of the Netherlands to President Truman on his inauguration. This jewel and enamel encrusted masterpiece is displayed, with honor, at the Truman Library. Several pieces by Brom were in the exhibit—of note was a water pitcher, raised and fabricated, and a delicate cloisonné platter.

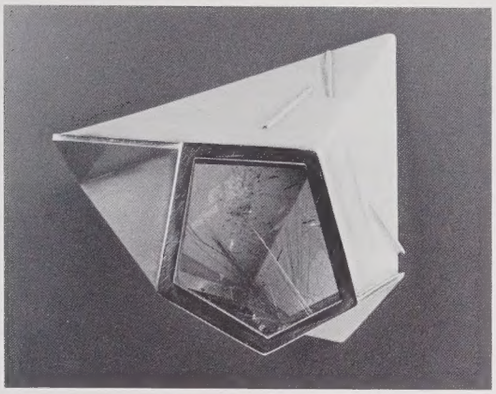
Work by other instructors was on display, including Ronald Wyancko's graceful sterling silver forms, which added a sculptural dimension; Mary Kretsinger's exotically constructed and enameled jewelry in high karat golds and sterling. Her necklace of 18k yellow gold and jade is particularly noteworthy. The setting for the antique jade can be taken apart and worn as a separate pin. Her expressively enameled and granulated neckband also shows her great ability to design and construct complex jewelry.

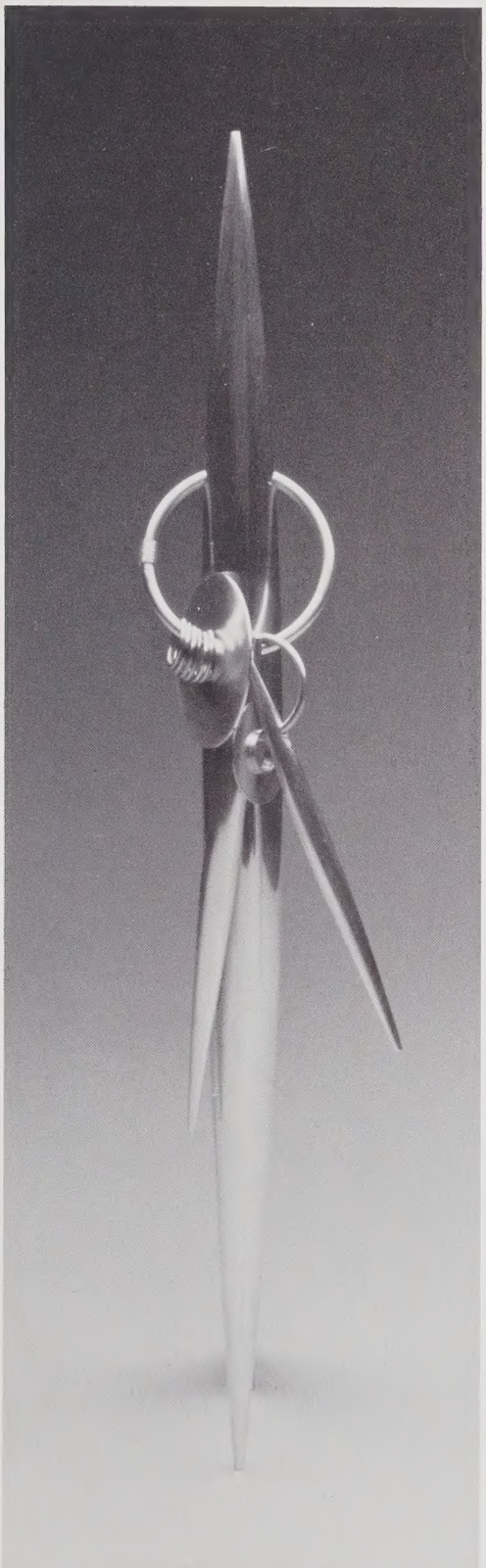
Other instructors in the school included Ronald Hickman, who had also spent time as director of the Art Association; Rama Webb, who taught both jewelry and enameling; Jed Closson, Richard Mawdsley, Roger Mathews, Janice Stumphauser, Charles McDonald, Alma Taylor, Ed Vliet, A.S. Swenson—all of whom taught, predominately, jewelry and silversmithing—enamelist, Polly Rombold; and current Wichita Art Association Director, Glenice Lesley Matthews. The present instructor, Randall Gunther, was not included in the exhibit because of its format.

All told, 50 pieces were exhibited, ranging from intricate jewelry to large-scale holloware. There was excitement and surprise in the pieces representing the instructors over the time period. Both serious students and casual observers found the exhibit enlightening and educational. The Wichita Art Association has a proud heritage. It is hoped that the goals of the founding members of the Association will help keep this established tradition of excellence alive and growing.

Below left: Mary Kretsinger, *Necklace/Pin Assemblage*, 18k gold, jade; medallion 4" d.; **below right:** Margret Craver, *Dress Clip*, 18k gold, turquoise, 2½" h.; **bottom:** Gunda Lee Cornell, Goblet, sterling silver, 8" h.







Worked with Gold II
Quadrum Gallery, Chestnut Hill, MA
October 18–November 1, 1985
by Joseph Wood

For a brief time in October, Quadrum Gallery staged an invitational exhibit whose theme and title "Worked with Gold" presented an opportunity to selected artists who work with gold to send a representative group of work. Like most galleries, Quadrum has a dual identity. It announces itself as a showcase gallery for contemporary art jewelry, yet it maintains itself as an exclusive mall shop whose inventory is consigned. In light of this duality, I see the title and timing of this show in two ways: one, as a vehicle to provide a selection of expensive inventory, which, if requested, may remain until well into the holiday season; two, as a format to explore new possibilities for gold as an expressive medium.

The advent and subsequent lure of alternative materials testifies to our reevaluation of preciousness and the role of gold. Those artists who continue to work in gold have made a concious decision to use this material in spite of the multitude of effects currently available with less costly materials. This would seem to invite some exploration into using gold for effects that could not be approached otherwise. I found that the reasons artists used gold seem to be generated by cost and/or physical quality. These may be directed into rich statements, bland niceties or vulgar trinkets, depending on the skill and attitude of the smith.

Though weakness of skill was rare, attitude approached, in some cases, the most vulgar limits of conspicuous consumption. Respected names were not exempt from this particular genre of bad metalwork, the characteristics of which warrant mention here. It is jewelry created for the sole purpose of parading a price tag. It is meant to call attention to the owner's ability to acquire, rather than the object's ability to intrigue. With the bland niceties it shares predictable formats, thoughtless surfaces and stock solutions.

The artists who attempted some statement and have managed to use gold as an expressive material deserve mention: In both brooches and rings, Gayle Saunders has invented a method of creating jewelry objects of frame and ribbon. Black steel frames hold delicate ribbons of mixed golds. The subtle variations of color, the intermittent holes and the irregular, sensitive edges of the ribbons bear witness to a technical process that allows the material to speak in a clear voice. Its statement is in both format and interaction of materials.

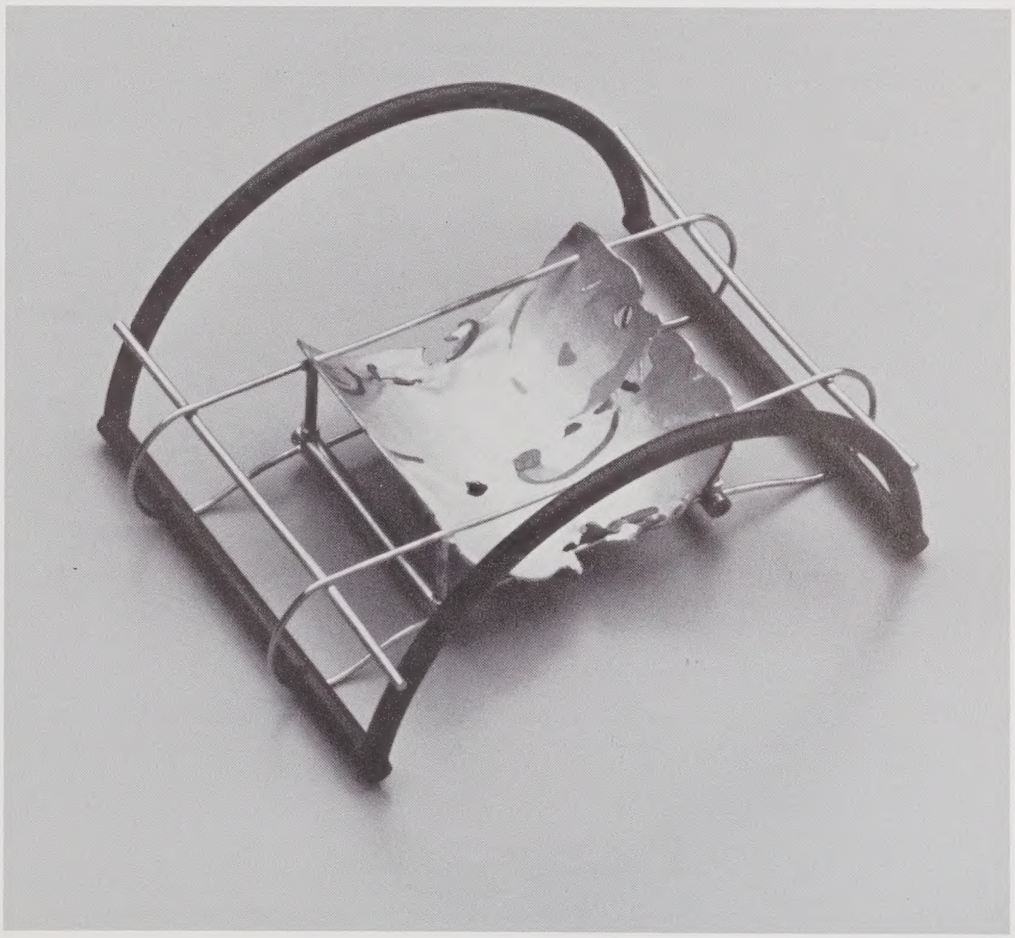
Rachelle Thiewes's large brooches, which are object clusters, appear beautifully menacing and defiant. Gold is used as a highlight material, playing against broad, darkly oxidized silver surfaces. Slender pointed objects dangle against smooth, round discs. This work is both evocative and refined.

Eleanor Moty constructs large sterling silver brooches, which appear to have crystalized around rutilated quartz. Gold highlights echo the inclusions in the quartz. Though visually heavy, they are virtuoso integration of inspiration and object.

Jill Slosburg's bulbous gold pins with irritated surfaces attack our expectations of gold jewelry. Their irreverance delivers a sense of preciousness that denies convention.

A show like this could easily draw a gallery away from its intent to provide the public with jewelry of conceptual quality. Quadrum struck a commendable balance with its choice of artists. However, it is unfortunate that to continue to educate the public about the virtues of art jewelry, bad jewelry is elevated to the same level.

Above left: Eleanor Moty, *Origami Brooch*, sterling silver, 18k gold, rutilated quartz, 2¾ × 2½ × 1"; **left:** Rachelle Thiewes, *Brooch*, sterling silver, gold; **below:** Gayle Saunders, *Brooch*, gold, steel. Photo: Powell Photography



Betty Helen Longhi: Wave Studies
Sussex County Arts Council Gallery of Art,
Georgetown, DE
September 3–20, 1985
by John Fix and Judy Frosh

Awarded a grant from the Delaware State Arts Council and the National Endowment for the Arts, Betty Helen Longhi determined to explore sculptural form on an impressive scale beyond her restrictions as a jeweler. In her statement, she declared her intention to pursue her interest in form, color and reflective surface. In addition, she expressed a desire to explore shell-forming in a new way. Her efforts culminated in this exhibit, which in accordance with her grant, she arranged to be educational. Photographs and descriptions dispelled some of the mystery of the process, accompanied by a display of materials, tools and work in progress.

The sinuous, colorful sensation of the exhibit as a whole immediately swept one into the mood of its title: "Wave Studies." One was first struck by the plastic, tactile quality of the sculptures, which invited touching. The fluidity of the forms, the softness of color and the delicacy of balance create a sense of floating. Working with bronze, brass and nickel silver for her mirrored surfaces, Longhi uses a controlled palette of niobium and titanium colors to play dramatically against the reflective planes; each curvilinear movement is striking against its foil. Restricting herself to two patterns, quadrilaterals and triangles, Longhi stretches her metals by counter-synclasting (synclasting from opposite sides) the shell forms that create the elements comprising her five sculptures. Because of her sensitivity to material and process, she achieves remarkable variety without losing a sense of harmony. Her forming, joining and finishing are masterful.

Fluidity consists of two pieces of nickel silver and one of niobium, all synclasted to create a dynamic interaction. The niobium is a lustrous curve of purple, peach and pink. Its convex and concave surfaces reflect back from the nickel silver like a fun-house mirror. Longhi is fascinated with the potential of distorting images. She allows interior reflections to create distortion and then curtails it by matte finishing part of the plane. This strengthens the form while diffusing the arc of colors.

Tubing is a shell-formed spiral of bronze which envelopes an open hemisphere of purple and gold niobium in a shadowy recess. By controlling the color transition from bronze to bronze-hued niobium, Longhi creates a subdued effect as the two metals meet and meld. The title refers to surfing when riding within the curl of a wave. Its opposing synclastic forms create just such a sensation as the eye travels the stretched elongated parts that curve into gracefully tapered points.

First Wave represents three segments of water in motion adrift on a sea of nickel silver. The brass wave rides and reflects on a silver sea. Behind it rise two titanium crests; one blue, one purple. The forms repeat themselves to create a sense of harmony. Longhi's fascination with the reflective quality of metal and its effect on form can be seen in the play of the brass plane on the nickel silver base to create a sense of deep interior volume. The only piece which relies upon a base to give it stability, *First Wave* is carefully and unobtrusively pegged and riveted to a wooden quadrilateral.

Breaker, composed of nickel silver and niobium, is spectacular in its conception and execution. The blue-green niobium wave rushes through its own reflection on the nickel silver—a marvel of grace in the echoing curves. Longhi illustrates skillful control of a resistant reactive metal. *Breaker* has a critical balance point, which permits it to rock gently for five or ten minutes. Ingeniously assembled, with no mechanical parts showing, it creates the illusion of a fluid, free-floating object. Longhi successfully coaxes a seemingly spontaneous breaker of niobium to float in harmony above its silver sea.

In this body of work, Betty Helen Longhi brings together her great knowledge of metal and her highly developed skill as a metalsmith with the esthetic sense and spiritual quality of the artist. One only hopes that these works will be seen and appreciated by a much larger audience in the near future. To this end, the exhibit was reinstalled in January, 1986 at the Delaware State Arts Council Gallery in Wilmington, Delaware.

Below: *Breaker*, nickel silver niobium, 25 × 13 × 7″;
bottom left: *Fluidity*, nickel silver, niobium, 18 × 12 × 9″;
bottom right: *Tubing*, bronze, niobium, 10 × 18 × 9″.
Photos: the artist

Lalique & The Art Nouveau
An International Jewelry Symposium
Fashion Institute of Technology, New York City
November 23, 1985
by Charles Lewton-Brain

The second in the series of mini-symposia organized by Jean Appleton at F.I.T. was scheduled to coincide with the exhibition of 47 major Lalique works from the Gulbenkian Museum in Portugal at the Walters Gallery in Baltimore. This exhibition travels to Richmond in January, and later to Forth Worth and Los Angeles before returning to Portugal.

The lecture titles were "Lalique: The influence on French Design" (Martin Eidelberg), "Jewels by Lalique in American Collections" (Mary Proddow), "René Lalique: Genius of Art Nouveau Jewelry" (Vivienne Becker) and "The World of Lalique: The Gulbenkian Collection" (William Johnston). The illustrating slides were good quality and it was great to see such a concentrated group of Lalique and his contemporaries work. Following the lectures was a buffet and a chance to meet people. Participants came from Europe and Japan as well as the United States for the symposium. Among them was Oppi Untracht, who was in New York doing research for a book on the work of his late wife Saara Hopea Untracht.

Eidelberg concentrated on establishing a historical and artistic context for Lalique (born in 1860) and his work, beginning with his rather pedestrian early work, which included charmlike objects such as tiny windmills. Using the work of craftsmen in glass, ceramics and metal of the time, Eidelberg showed that Japonisme (Japanese mania) pervaded French society during Lalique's developmental years. Images were often copied directly from Japanese prints and Lalique was not immune from this. For example, the much-copied Hokusai fish appear in his work.

The 1880s saw a reaction to Japonisme, craftsmen turning to nature itself as a source of esthetic inspiration. However, the Japanese attitude to material continued to have a strong influence in the placement of value on humble materials and objects through the use of color and superb craftsmanship rather than intrinsic economic worth (as of diamonds). Lalique's 1896–97 introduction of horn to jewelry and use of essentially valueless materials, such as glass, iron and some of the early plastics, may be related to this. Another inportant influence on Lalique's work was that of Symbolist art and poetry, an example being his use of the head in jewelry, an important Symbolist image. Of note too was his earlier (1880s) introduction of the female nude to jewelry, which gave him his first notoriety in France.

Proddow's lecture was disappointing in that only a few of her remarks dealt with her topic. I found her style irritating, with no use of notes and a kind of stream-of-consciousness lecturing technique. She obviously knew a great deal about fashion history and influences, but it did not seem to work as well as some of the other approaches when applied to describing Lalique's work and place in history.

Becker, like Eidelberg, created a context in which to view Lalique's work. Her first slide showed his 1900 display window at the Paris Exposition Universelle. She successfully evoked the shock the public experienced on being confronted with his work: nude women, bats, exotic, erotic, morbid imagery. Using comparisions, she demonstrated the vital, intense aspect to his work, which set him apart from other jewelers of the time. Turn-of-the-century ideas and concerns were introduced. These included a preoccupation with transformation, metamorphosis, the change to a new century, changes in society and in societal roles. Lalique's metaphors for this included butterflies, fish, water and frogs. The rise to fame of women like Sarah Bernhardt and Loie Fuller and the sensual, self-willed image they projected were part of the changing perceptions of the role of women at the time. Both women knew Lalique, and Bernhardt introduced him to Gulbenkian.

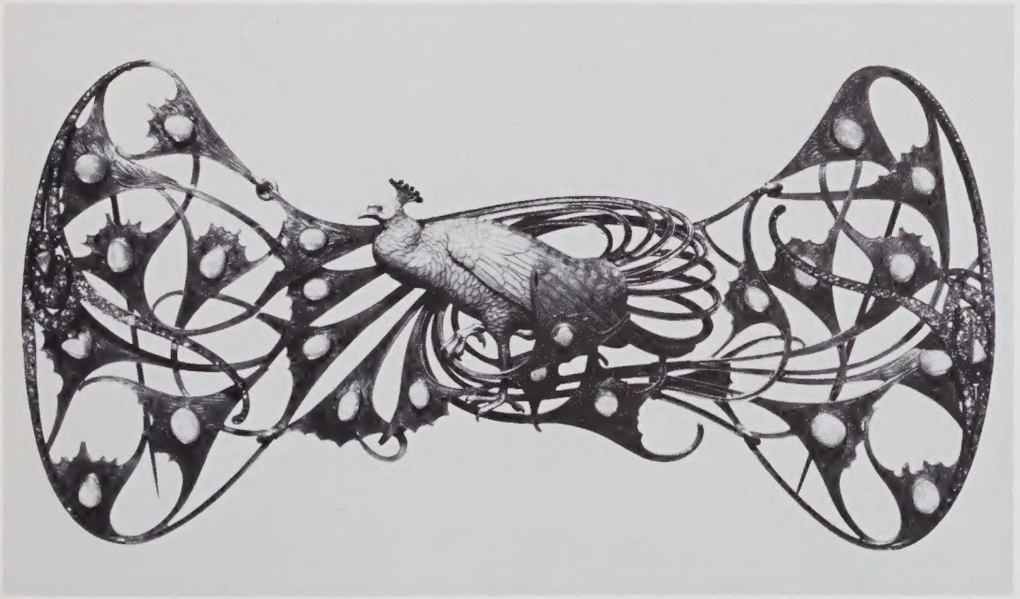
A Symbolist sense of eeriness and morbidity lends a gruesome aspect to some of Lalique's work: a dragon eating a winged woman, bluebirds caught in women's hair, floating hair as of a drowned person. Later works include limp, decaying plants, indicating the importance of themes such as death and renewal through death. Not mentioned by Becker was the influence of theosophical thought at the time, transformation, cycles of birth and death, oppositional struggles and contrasts of good and evil.

A surprise guest was Lillian Nassau who showed slides of her extensive Art Nouveau and Lalique collection.

William Johnston of the Walters Art Gallery described the life of Calouste Gulbenkian, his contacts with Lalique and his eclectic and informed collecting habits. The slides of the exhibition were excellent. Of technical interest was Lalique's use of a pantograph machine in carving ivory faces from much larger relief models.

In my view this symposium was not as successful as the first ("Collectors & Collections," *Metalsmith*, Summer 1985, p. 53). It was very short, a morning, without time for a break. This resulted in a somewhat hurried atmosphere, which detracted from the business at hand. The relatively small number of presentations on a restricted theme left an impression of an element of duplication, of personal interpretation of the same events by different speakers.

The third F.I.T. symposium is scheduled for April 12, 1986. It will be a full day with an evening preview of a Christie's jewelry sale. The program seems to be an improvement on the extremely good first symposium. F.I.T. is to be praised for initiating and developing this series of international symposia, and it should be interesting to see what they present in the future. (For further information, contact Richard Martin, Executive Director, Shirley Goodman Resource Center, Fashion Institute of Technology, 227 West 27th Street, New York, NY 10001; telephone (212) 760-7970.)



Above left: *Dragonfly*, diamonds, chrysoprase, moonstones, enamel, gold, 270 × 265 mm, c. 1898–99; **left:** *Peacock*, diamonds, opals, enamel, gold, 93 × 187 mm, c. 1898. Collection: Calouste Gulbenkian Museum

Opinion

"Re-Visioning the Crafts," Penland School; "Colloquium for the Future," Haystack School

by Patricia Malarcher

American crafts are undergoing self-examination. Expressed in countless ways, varying from anxiety to optimism, the observation that the field is changing is heard frequently now. Although no ready answers are available, artists, gallery owners, museum directors, collectors and others close to the field are asking where it is going.

Pleas for critical discussion and documentation indicate a need for recognition and appraisal. At the same time, crafts have branched out in so many directions that no common thrust is evident. While many artists working in craft media are seeking, and some finding, acceptance by the fine arts community, others are looking toward designing for industrial production. For some, craft fairs continue to provide viable, ongoing outlets, but only at the risk that producing for the market can lock them into repetition of past successful work.

As teaching jobs on all levels have diminished, craftsmen no longer can expect the educational system to support their creativity. Yet, they are finding their way into new areas—writing, curating, consulting—that have helped bring crafts to the attention of a broader public.

Despite the self-scrutiny within the field, museum exhibitions of crafts continue to attract record-breaking crowds. Still, there are complaints that crafts have become so slick that the maker's hand is no longer visible.

Distinctions between "functional" and "nonfunctional" crafts have existed ever since the early stages of the movement after World War II. However, according to those who remember, initially crafts were unified by an assertion of intangible values, such as integrity and "truth to materials," that set them apart from the art establishment, the business world and middle class aspirations. According to that view, now the crafts community is reaching toward the very things that, originally, it opposed.

The time is ripe for reappraisal. Thus, it seemed appropriate that last summer two attempts were made to address the situation. One, a three-day forum entitled "Re-Visioning the Crafts" took place at the Penland School of Crafts. The other, a "Colloquium for the Future," was integrated into a special, academically oriented session at the Haystack School. Although the two events differed structurally, conceptually they converged on the concern for values. A shared perspective was that the crafts movement, particularly in its recent emphasis on marketing, no longer reflects the humanistic principles that were assumed at the beginning.

Harold Evans, the director of Haystack, in an interview after the colloquium, described the present situation as "a values crossroad."

More explicitly, Verne Stafford, the director of Penland, opened the forum with questions: Are craftsmen sacrificing creativity for success? Have "careers" become more important than "work"? Has one all-pervasive style been imposed by a marketplace unconcerned with content? Are new ideas being stifled by the "establishment" of galleries, the National Endowment for the Arts, the American Craft Council and schools?

I was among 60 people—artists, educators, arts administrators, gallery representatives and miscellaneous searchers—who had converged at Penland from all over the country. Many, including myself, were attracted by curiosity. There also were hopes that, through our collective presence, some issues might be clarified.

Admittedly, my personal perspective had been colored by my experience last year of reentering America after a month in Indonesia. That immersion in an exotic craft tradition, expressed in great diversity from one region to another, had sent me home with a fresh perception of crafts.

Stopping off in Honolulu, I headed for a craft gallery which, due to its reputation, I had long regarded with esteem. I was disappointed, partly because it had moved to a shopping mall, where it could barely be distinguished from the neighboring shops, but mostly because the featured works were East Coast decorated plates I had already seen in New Jersey. I had hoped to find something unique to Hawaii, but the only regional items were the sort of pedestrian work that remains forever local.

At my next stop in San Francisco, the same line of decorated plates reappeared, not only in a leading gallery but also in a blue-chip department store. Unfortunately, what had initially been eye-catching seemed to become less interesting with each encounter. It seemed that the creative energy invested in marketing this work was greater than that in its making.

That impression was amplified by the contrast of my experience in a gallery of ethnic folk art—also in San Francisco. There, in one piece after another, was imagination, ingenuity, risk and—most critically—spirit. It didn't seem to matter whether they were old or new, one-of-a-kind or production items, made for export or for an indigenous community. They communicated an energy and surprise that was lacking in the craft presentations.

Although the months that followed yielded many encounters with American crafts worth acknowledging in print, I was left with unresolved questions. I could not forget the impression that, despite the sophisticated skills they represent, American crafts on a marketing level had become as predictable as toothpaste.

In retrospect, I see the past year as a time of personal reevaluation of the movement. The Penland event was one episode in that search. Led by Verne Stafford and Paulus Berensohn, the forum was designed around general assemblies presided over by eight panelists. Among them, several had the status of "ancestor figures": Eudorah Moore, former crafts coordinator of the National Endowment for the Arts; M.C. Richards, the author of *Centering;* Gerry Williams, a potter and the editor of *Studio Potter;* Robert James, a potter and long-time professor of art at the University of Oregon.

Unfortunately, while the participants found stimulation in each other's company, as well as during informal sessions with the panelists, the forum failed to get off the ground. The sessions were punctuated by repeated references to the term "humanism," which at times was used interchangeably with "function." However, once the sessions got underway, the market-oriented issues Stafford promised to raise in an "ambiguous attack on the establishment" were never addressed. Instead, the focus lurched from one subject to another.

Reinforcing a memory of crafts as an outgrowth of a postwar search for human values was the fact that the forum coincided with the 40th anniversary of Hiroshima. Shaping the group's response to that commemoration was Louise Todd Cope's vivid, eye-witness account of the national "ribbon project." (An anti-nuclear protest, the project had involved the encirclement of the Pentagon with thousands of banners made by amateur groups as well as professional artists.) Cope's account was authentically moving; in the banners the democratization of art for the expression of protest affirmed its potential for humanistic causes. Yet, the project's very sincerity reinforced the forum's troubling drift toward a devaluation of excellence for the sake of humanistic ideals.

Throughout the forum, there were allusions to crafts that projected the aura of a secular religion with the functional potter as priest and the pot as an icon. A rousing ovation in response to Gerry Williams's reading of his own editorial on function had a definite revivalist fervor.

In general, the forum sacrificed the possibility of examining the present by eliciting ghosts of the past. Finally, at the last session those were put aside when the panelists were asked to project their own immediate futures. A sampling of their responses: M.C. Richards has been approached by members of the business community to develop art-related programs to serve the personal development of corporation members; Ralph Burgard, a consultant who explores, on a national scale, new uses of cultural resources, will continue to help "make communities a celebration of citizens rather than a test of endurance"; Eudorah Moore spoke optimistically of the expanding connections between crafts and the worlds of industry and architecture. While most of the answers had humanistic overtones, it seemed significant that the visions that emerged encompassed a much broader scope than the functional pot. If there was any message, it seemed to be that humanistic principles were not dependent on the crafts for their survival.

At the Haystack colloquium, which had been conceived by Bob Ebendorf as "a creative gamble to help up-and-coming leadership," the format consisted of a series of seminars during a session attended by graduate students and others

with professional commitments to the field.

According to Evans, "we wanted to begin to empower new leadership from a viewpoint that recognizes spiritual, right-brained values and sees the difference between economics and ecology. The message in American crafts now is that the best artists are successful marketers of style. We want to see artists reach beyond commercialism." (As a point of reference, he spoke of *The Gift,* a book by Lewis Hyde, which, in attempting to interpret art value as a quality above and beyond material worth, refers to the practice of gift exchange in tribal societies.)

While each seminar dealt with a specific topic—"The Spirit of the Process," for instance—the participants interviewed agreed that a paper presented by Wayne Higby on "Craft as Attitude" provoked a discussion that was particularly stimulating. (That paper has since been published as a pamphlet with a Haystack imprint.)

Tracing the craft movement from the aftermath of World War II, when "craft was seen as a vocational choice that would integrate its practitioners with the natural patterns of universal good" to the 1980s, "the era of whatever works," Higby noted that a deterioration in quality during the 1960s was reversed in the 1970s. Then, he wrote, as crafts split up in different directions—the "elitist idea of one-of-a-kind objects," the "highly intellectualized principles of serious functional aesthetics" and the idea of "high art and high prices"—their common ground was that "each succumbed to being a marketing strategy."

Questioning whether craft, to be art, must adhere to the accoutrements of the New York art establishment, Higby proposed a solution of viewing craft, in a nonexclusive context, as attitude: "a mental position toward making which seeks to fuse good intentions with an effort to achieve artistic perfection."

Further on, in quoting art critic Suzi Gablik's conviction that [fine] artists, in crisis due to the demands of the art establishment, must reevaluate their motives, he implies the ironic possibility that craftsmen "crossing over" into the art world might meet some familiar moral questions.

Did the colloquium satisfy the intended goals? Opinions varied. Evans, who witnessed it from start to finish, thought it worked. John Prip said that, although the group was slightly different from average, the session did not seem dramatically different from any other Haystack session. Ebendorf, who was there for three days in the middle, had reservations.

"As much as we tried to talk about lofty ideas, it boiled down to money. I wanted to talk about what people read and what kind of art history they cared about. But, 15 minutes into a discussion, they wanted to know about promotion and public relations." Further, Ebendorf noted, while his initial hope had been "to reach into a whole pool of creative people," the session failed to lure "hard-core production" people from their studios.

Higby's paper offers a mental escape from rigid categories in a pluralistic art scene. His analysis of history is seductive, if oversimplified. However, I found myself resisting his reduction of crafts in the 70s to "marketing strategies." It probably is true, as he suggests, that craftspeople turned toward marketing then as a reaction to the lassitude after the 60s. However, I would rather see it more positively as a healthy contact with reality after a period of starry-eyed idealism. And was it not also related to the shrinking of the academic job market?

Despite my own conviction that marketing demands can be a counter force to creativity, I was troubled by the fact that so much opposition to it came from people with security in academic roles. Perhaps, as suggested at Penland, for some artists the answer to artistic integrity lies in the example of Charles Ives, the musician, who held an ordinary job during the day and did his composing at night. Others might resonate with Higby's suggestion, offered during a telephone interview, that if the same level of concern applied to art were brought to other occupations, there might be fewer artists struggling to survive in the marketplace.

However, a solution based on diminishing the amount of work being made and shown does not seem satisfactory. Nor does the attempt to look nostalgically toward the recent history of crafts—for anyone under 40, the postwar climate and the humanistic incentives generated by it are historical abstractions.

Attending the forum and hearing about the colloquium led me to the conclusion that the problem of keeping creativity alive in artists oriented toward selling is not going to be solved in schools, where the marketplace is viewed as a compromise. I decided to adopt the attitude that the present marketing scene is a "given" that must be dealt with on its own terms. Reflecting on events I have attended during the year, I readily admit that much of what appeared at fairs, galleries and craft shops was dull, trite, contrived, derivative, poorly designed and overpriced. Yet, within the marketing system itself, there were significant glimmers of hope.

Among them were projects conceived to offer artists the means and incentive to experiment. One such effort, which has been well publicized, was the collaboration whereby the Formica Corporation, in partnership with the Gallery at Workbench in New York, challenged a group of furniture-makers to work with the product called Colorcore. The innovative results are now in a traveling exhibition. In a similar vein, for an exhibition called "Silkworks," the Gayle Willson Gallery in Southampton, New York, in collaboration with American Silk Mills, invited a number of fiber artists to explore the possibilities of silk. On an individual scale, the Lee Sclar Gallery in Morristown, New Jersey helped Carroll Bassett, a blacksmith, find a local factory where he could shape blocks of steel with an industrial steam hammer. The immediate results, shown at the gallery, were unusual, but not altogether successful, vessel forms. However, as a direct result of his experiments, Bassett recently has developed a strong new approach to sculpture.

Shifting to the area of craft fairs, it is obvious from recent articles and letters in *American Craft* magazine that protests are being raised about the ever-expanding size and trade-show atmosphere of large-scale events, particularly the Springfield shows sponsored by American Craft Enterprises and its competition. However, the Philadelphia Craft Show has managed to retain its small scale and reputation for excellence. This year, the quality there was consistently high, and yet many artists made a point of offering some things that were priced for out-of-wallet impulse buying. Also, the presence of several exhibitors from Pennsylvania who do not show in any other fairs gave this a regional flavor. (I wondered how much the makeup of the jury contributed to the show's quality. Unlike many large fairs, which are juried by previous exhibitors, the Philadelphia show was juried by people who do not exhibit in fairs. Is that distance from the situation a positive factor in the jurying process?)

In regard to the connection with industry, it was sobering to see the current traveling retrospective exhibition of textiles by Anni Albers, organized by the Renwick Gallery. It offered a reminder that the Bauhaus goal of craftsmen designing for industry, which predated the universities' claim on crafts, is an honorable pursuit, as well as a part of our tradition.

The above unrelated instances hardly make a case. The point, perhaps, is to suggest that there is no shortage of creativity, when it is challenged. Perhaps what is needed is not fewer artists in the marketplace but more people there who are willing to help artists grow.

To conclude with a comment on the subject of values, I return to a school situation. The occasion was a critique last fall following an intensive anagama course at the Peters Valley Craft Center in New Jersey. The participants were a mixed group, differing in age and professional experience. Under John Chalke's leadership, the anagama had been fired in a straightforward, unromantic manner without the mystique of the Japanese philosophy, which had accompanied that kiln's previous firings. As a spectator, I felt caught in a time warp: the discussion could have been taking place in any clay studio at any time between the 1950s and the present. As the group dispersed, one or two, with embarrassed caution, voluntarily remarked that the project had been a "spiritual experience." It struck me that the philosophical value of craft is a by-product that may be implicit in the process but must be continually rediscovered through experience.

Patricia Malarcher is a fiber artist and freelance writer, who contributes a regular column on crafts to the New Jersey section of the Sunday New York Times.

Pamela Ritchie: Wallflowers
The Craft Gallery, Toronto, Canada
October 30–November 24, 1985
by Anne Barros

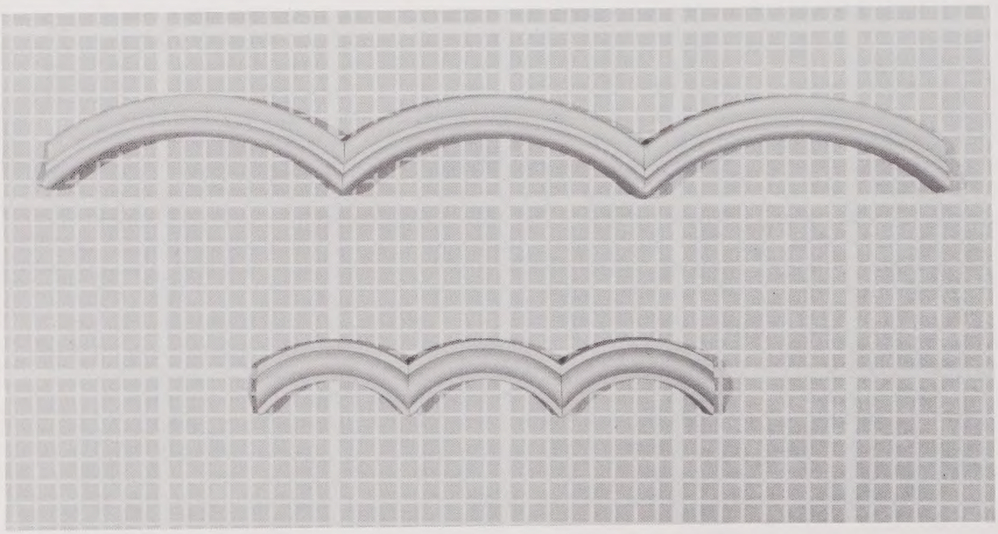
To Pamela Ritchie, wallflowers are not only shy girls at tea dances. For this Halifax goldsmith in the Jewellery Department of Nova Scotia College of Art and Design, wallflowers are pieces of art jewellery that sometimes sit out a wearing on samples of Victorian-looking wallpaper. The conceit here is both playful and serious.

Ritchie is a cerebral jeweller whose concepts are always a challenge to the viewer/wearer. Her show at The Craft Gallery featured 12 different pieces of strongly patterned wallpaper mounted on heavy handmade paper (46 × 61.5 cm). Fastened to the wallpaper at the axis of a pattern or on a lateral stripe were brooches or earrings, often so closely coloured to the background that they were not at first perceived as three-dimensional. The thoughtfulness behind this exhibition unfolded as one walked from piece to piece as if through the rooms of a Victorian house. First there was a deep woad blue paper with floral chintz design and niobium and paper brooch attached; then a geometric lattice pattern in burgundy with painted wooden brooches flying out. Ritchie was playing with ideas of art on the wall, vertically, and art on the body, also vertically, and the kinds of movement that can occur in and between both states.

In the most successful combinations, like *No. XII*, the brooch while integrated with the wallpaper offers itself to the viewer less shyly than the girl at the dance. On the jewellery Ritchie uses spikey protrusions, similar to the thorns on a horse chestnut, which seem natural when set against the garden wallpaper ground. Tactically they tease, and the viewer reaches out to respond to this invitation, to the conceit. Such seems to be Ritchie's aim: to make us think about jewellery, how it is shown and how it is worn.

The jewellery pieces have evolved from Ritchie's pleating and niobium in her *Children of Niobe* series. The brooches are simple but meticulously constructed. Often the wallpaper is pleated between two boxy silver holders, or fanned on the earrings. The brooches' minimalism requires either the wallpaper or the wearer to complete the statement. This is the first time I have seen wallpaper used in this manner. It was fresh and yet associated with one's past exposure to wall coverings, As jewellers we are always concerned with the backgrounds against which our work is worn or shown. Will it be against white walls like modern museums, or will the feeling for colour and pattern interact with the jewellery to consume it, harmonize with it, or perhaps cause it to take on greater meaning? As a jeweller who has worked in theatre design, Ritchie is certainly aware of all the possibilities of *Wallflowers*. More timid jewellers might have played safe with the acid-free papers of the museum approach, but Ritchie chose to explore the possibilities of jewellery against decorative backgrounds.

Below: *Wallflowers*, wood, metal, paper, 46 × 61.5 cm; **bottom:** *Wallflowers*, metal, paper, 46 × 61.5 cm



Madison Avenue Roundup
December, 1985
by Antonia H. Schwed

The Carlyn Gallery at 1145 Madison Avenue, New York City, is in its infancy: it only opened in September, 1985. The space is quite fabulous: ground floor, corner location, with two large, almost sidewalk to ceiling windows, and a spacious two-room, well-lit interior. The owner, Carol Soling (the director is Roslyn Tunis) seems enthusiastic and open-minded. The gallery is eclectic, multimedia—ceramics, wood, weaving, enamels, jewelry and so on. Their opening exhibit, with the pleasing title "Echoes and Visions," was a beautiful show, an elegant and interesting presentation of fine work. However, the Christmas exhibit, called "That's Entertainment," I found a little embarrassing; some of the work was so raucously cute that I could scarcely bear to look at it. Galleries must sell to survive, so it is naive to expect them to be above the commercial, but I do hope this show is not a sign of the direction Carlyn will take: gentrified boutique.

There was indeed good work amidst the Christmas panic. In the jewelry area specifically: Marianne Hunter's skillful use of finely enameled centerpieces for her necklaces; the Eskimo inspired jewelry of Jessica Felix—little sterling masks with feathers; Beth Ylvisaker's jewelry made with butterfly wings and feathers; facet-cut semiprecious stones—those stones that are usually cabochon cut—in jewelry by Paul Morelli; Sergei Blumin's droll silver clothing sculpture. And more, ranging from excellent to mediocre. I hope Carlyn can return to and stay with the original format of that first exhibit and really get established as a distinguished gallery.

In comparison, there is a firm, almost closed atmosphere of control in the Neil Isman gallery at 1100 Madison Avenue. On talking with Isman it soon becomes very clear that all work in the gallery must meet his strong criteria of artistic validity. (One definite feeling he has is that work should be readily identifiable with the artist.) Neil Isman is a survivor on Madison Avenue—no mean task—having been there for 11½ years, only approximately the last two of which have been devoted to modern jewelry; prior to that he specialized in art deco and art nouveau. His holiday season display consisted of work tightly arranged in closed cases and wall cabinets, all in a rather small, one-room area, but with a good display window on the avenue. The climate was more like that of a shop than a gallery. Much fine work is dimmed by the shining excess of closely aligned pieces. One has to peer to see the beautiful work of Belle and Roger Kuhn. Incidentally, Roger Kuhn is doing some separate silver work of his own, which is most elegant. And there are clean, handsome pieces by Hans Stahr (from Rio); a particularly lovely necklace by Betty Helen Longhi, which incorporates a flowing, leaflike form plus the first use of niobium that I have ever really liked in jewelry. There is splendid marriage of metals work by Tony Papp; outstanding design by Yoshiko Yamamoto, who shows a great range of concept from the spidery-delicate to the substantial. And there are many more fine works, all rather hard to zero in on because of the multiplicity of the pieces and their proximity to each other. Unfortunately, when work is shown like this, even the finest artifact seems to lose its importance.

Byzantium at Cravetz & Kahan, 810 Madison Avenue, is presenting "The Golden Jubilee Collection," basically a jewelry collection created to honor a group of 15 great divas (might it not have been intriguing to include some of the great male singers of the Metropolitan?) and commissioned by the Metropolitan Opera Guild. The exhibit has an extensive touring schedule—from Palm Beach to the South of France—and will be intermittently at the gallery until about September or October of 1986. The gallery also has on permanent display regular work by their artists.

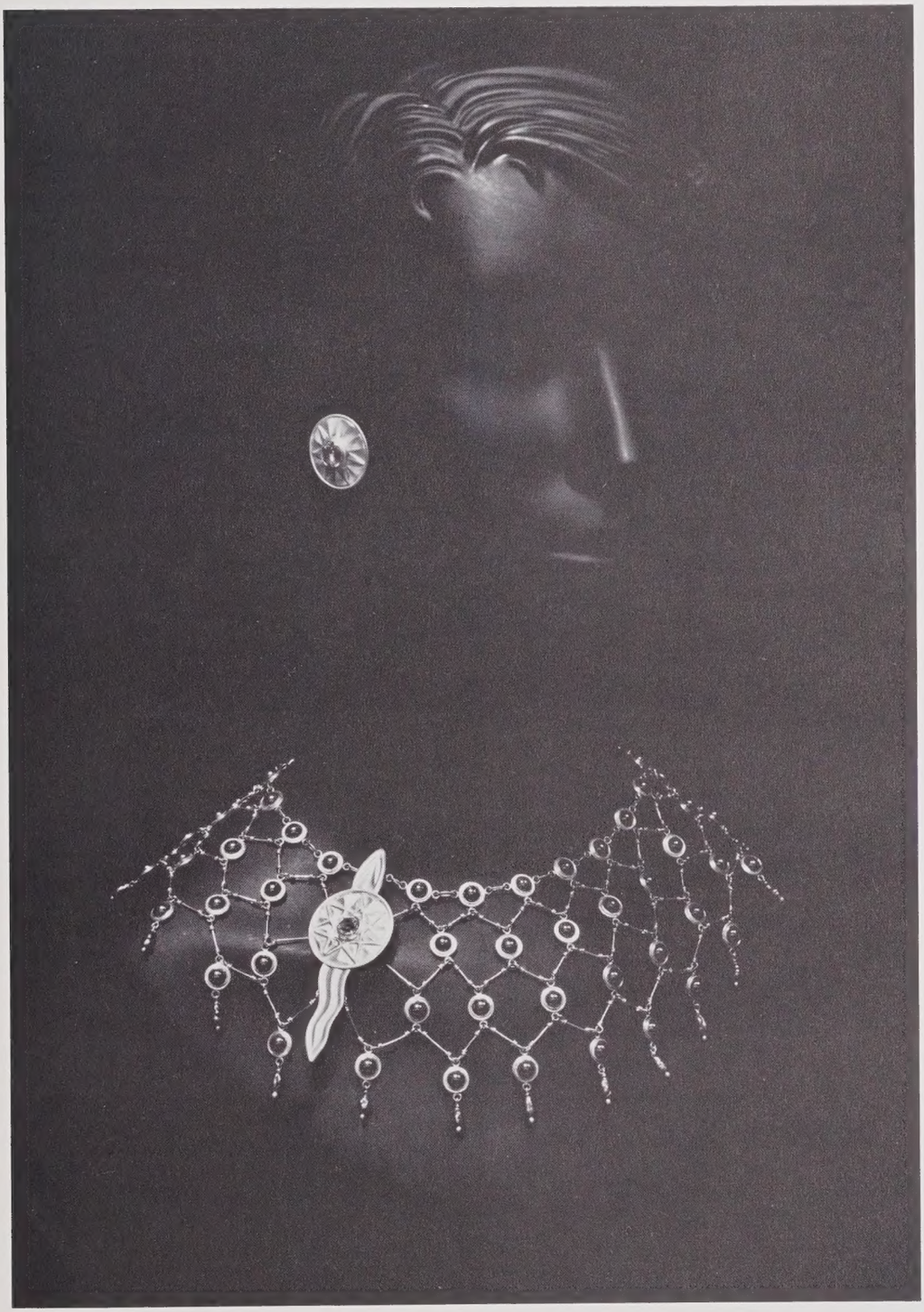
A uniformed guard lets you into the upstairs gallery of Cravetz & Kahan, estate jewelry; from there you go down thickly carpeted stairs to the Byzantium Gallery (which, although not new, has only been at this location since August, 1985) and arrive at a sort of Benvenuto Cellini land. Gold, gold everywhere—only 18k or higher—most of the jewelry very complicated and gleaming with emeralds, diamonds, rubies, pearls, opals. All is beautifully arranged and presented by Luisa del Valle, also a contributing artist to the show.

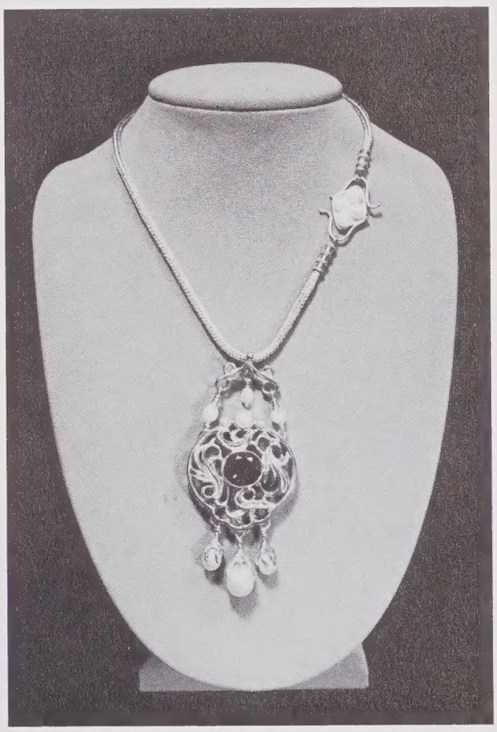
Dr. Stephen Paul Adler filled me in on some of the myriad details of the exhibit. In addition to being a psychoanalyst, he is a co-founder of Byzantium, and an outstanding contributing artist. The conception of this exhibit was his. Each piece in the exhibit is one-of-a-kind until sold, and only then can another be made—some up to 50 times; others only two or three times; a few are to remain unique. A group of international Byzantium artists was selected and assigned a specific diva for whom to create. The jewelry in this exhibit is not "stage" jewelry; it is supposed to be a tribute to and an interpretation of the diva, usually involving some major role with which the diva has been associated. Initially, the artists received a portfolio on the diva and then used their own resources for further research (some even took trips abroad) and for their actual production of the pieces.

The result is an incredible collection of rings, brooches, earrings, necklaces and other artifacts. To mention just a few: *Mozart Beads*, a long necklace consisting of beads with granulation (no two alike) and beads set with tiny emeralds, is a marvelous work done by Cornelia Roethal to honor Rise Stevens. Dr. Adler's tribute to Roberta Peters, called *Queen of the Night*, with its lacy structure of gold and hematite and lovely green Afghanistan tourmaline, is the kind of piece that combines strength with delicacy. Luna Felix, Moroccan by birth, has done a gem-laden pendant on a gold chain that is supremely skillful, if a shade too baroque for me. Then there is Mary Lee Hu's stunning woven gold collar in honor of Elisabeth Rethberg's performance of "Aida." Also outstanding are the exquisite carved opal poison bottles (from "Cosi Fan Tutte") by Michael Wallace.

Some may criticize the exhibit as being "too much," but I don't think so. I think it accomplishes its objective superbly. It is an opera-inspired exhibit and often opera itself is "too much," or "bigger than life." This is an opulent, extravagant, glittering show, and I say, Bravo!

Although I have no space left for details, I must mention one of the finest enamel exhibits I have seen in New York. It was at the Aaron Faber Gallery, 666 Fifth Avenue, in the attractive upstairs exhibit area. Well displayed were enamel artworks (jewelry and pictures) done by American and international artists and ranging from superb classical limoges to the most exciting modern work.





Below left: Dr. Stephen Paul Adler, *Queen of the Night* to Roberta Peters; **below:** Cornelia Roethal, *Mozart Beads* to Rise Stevens; **bottom:** Luna Felix, *Moroccan* to Marilyn Horne

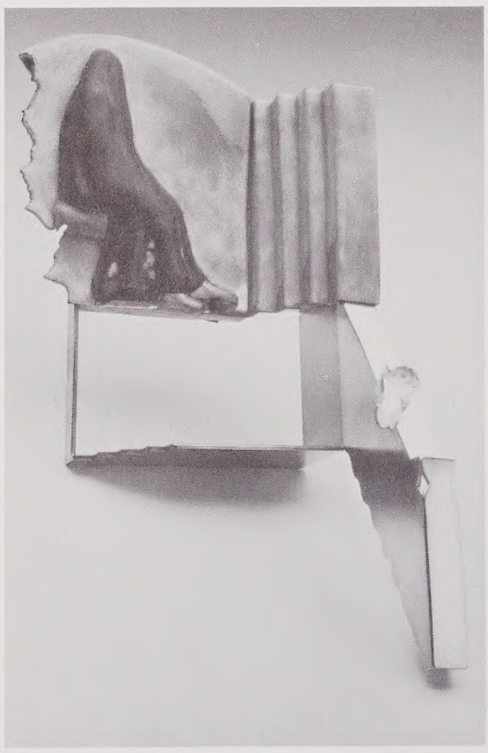
Dana Bussell: One-Woman Show
Glass Gallery, Colorado State University,
Fort Collins, CO
October 12–November 15, 1985
by Leslie F. Brown

Dana Bussell's work is fundamentally an iconography of "freely and intuitively" juxtaposed images. Of the 15 pieces included in the exhibition only four were jewelry—all brooches. The 11 remaining, with one exception, were wall pieces. As in the traditional icon Bussell's work is imbued with imagery and color, although Bussell's color is generally subdued. Often the work includes a human reference—a figure, hand or object, such as a microphone or stairway.

The juxtaposition of images, not the technique, is the subject. The works are primarily assemblages of enamel work, metal fabrication, wood and in one case fabric. The craftsmanship is so skillfully done that all thought of technique is forgotten. What remains is to enter into the imagery and enjoy the mysteries. In fact, it seemed to me that many of the pieces could have been done in other mediums and lost none of their effect.

The blending of common images with ambiguous shapes and forms is recognized by the viewer for its nature rather than its content. The effect is that of the selective memory after an event of emotional confusion where only a handful of images remain and their relationship to one another is uncertain, subtle and constantly shifting. In one of her more humorous pieces, *Gravity, My Dear, Gravity*, Bussell has turned the remembered event literally upside down. Viewed head-on, this wall piece, in shades of blue, black, red, green and yellow with a brass-trimmed mirror at the back, suggests objects of Mexican folk art with its bright colors and tin mirrors. Yet looking into the mirror one perceives that an ambiguous form at the front of the piece is reflected back in the mirror as a human figure standing on its head.

Cameo, the most traditional in iconographic reference yet the most indecipherable, is an assemblage of color, form and line. The gray background sets off well the wood oval, painted in shades of gray, red, blue and a tinted yellow. In contrast is the metallic gleam of the pewter rods and scalloped forms around the oval's edge. Rising off the oval is a pale green enameled form, whose qualities are reminiscent of shell fragments found along a beach. The entire effect is one inviting peaceful contemplation.



Perhaps more typical of Bussell's work is *The Most Uncertain Hour*. In this work of enamel on copper with silver and bronze fabrication are found both a full figure and the imprint of a hand upon a banister. The figure is shrouded in black on a ground of grays. This work produces a sense of uneasiness arising from the subtle coloration and the mysterious figure in contrast with the hard edges and scalloped effects of the constructed area and punctuated violently by the ragged edge on the left. Unlike *Cameo*, no sense of contemplation exists here but rather one of tension and expectation.

Of the four brooches on display, three echoed Bussell's fascination with the repetitive pattern and form of a tiled roof, which also appeared as the primary element in an untitled wall piece. These three brooches are simple, flat shapes over which is fastened the black enameled tile pattern. The fourth brooch is an enameled representation of a man in oceanside rain gear seen from the back. All four could be said to be more decorative than expressive of Bussell's talent for the juxtaposition of random images.

One piece, number 14 and untitled, clearly did not belong in this or any other exhibition of Bussell's work. The piece is a flat slab of metal, shaped like a portion of a tree trunk with two enameled flower forms emerging from the center. The concept and execution are far too unsophisticated to be included.

The Glass Gallery at CSU is small but beautifully lit during the daylight hours. The right amount of work was included and only two pieces suffered from their location. These were wall pieces mounted on white, wood backgrounds which were well proportioned to the pieces. The wall on which they were displayed, however, was also white, which left the works somewhat lost in the milky vastness.

This exhibition by Dana Bussell, who has an impressive exhibition record already, was a strong statement of her esthetic interests, which, happily, stimulates, provokes and amuses the viewer.

Below left : *Cameo*, enamel on copper, pewter, oil on masonite, 11 × 8 × 2″; **below:** *The Most Uncertain Hour*, enamel on copper, silver, bronze, 7 × 4 × 3″.
Photos: William Lemke

The Art of the European Goldsmith: Silver from the Schroder Collection
Worcester Art Museum, Worcester, MA
Fall, 1985
by Tim McCreight

In the Summer 84 issue (vol. 4, no. 3) *Metalsmith* reviewed the Schroder Collection in conjunction with a symposium occasioned by its exhibition in New York City. That review focused on the symposium, this second installment addresses the work.

H.G. Wells was right. Time travel is possible, and it leaves you weak in the knees. The Schroder Collection, currently making a two-year tour of the United States, provides an exhilarating survey of goldsmithing from the European Renaissance. The show consists of almost 90 pieces, most made between 1550 and 1750. Each has been selected by far-sighted scholars for its historical importance and esthetic triumph. If these sparkling vessels were songs, this exhibit would be a Best of the Renaissance solid gold album.

As installed in the Worcester Art Museum, the work was impeccably presented. The floor plan was spacious without seeming disjointed. The room lighting and colors were mellow, but each piece was individually well illuminated. Paintings of the period were culled from the museum's permanent collection to provide a context for the work.

Most of the objects are functional or based on a functional ideal. Many of the vessels had to do with drinking. I counted 7 pitchers, 13 flagons and 18 chalices. The collection also includes a small selection of flatware and several dozen decorative ("centerpiece") vases.

Just about all the work is made in silver. Fully three-fourths of the pieces are gilded and burnished, infusing the term goldsmithing with uncommon splendor. Seen all at once the exhibit is dazzling, literally eye-squinting, breath-sucking dazzling. In the same way that Renaissance and Baroque cathedrals speak of something other-worldly, these masterful objects represent a sensibility beyond our usual plane. I've seen shop windows full of gold; this was a different shimmer. If you get to see this show, or perhaps one like it, don't move too quickly toward the first display. Step inside and pause, listen for the angels.

But then move to the work, case by case. After the color, perhaps the most striking quality is the frantic richness of the surfaces. Everywhere you see repoussé, engraving, stamping and minutely carved cast details. If there was a common bond among the makers of these objects it lies in their disdain for a plain surface. At first pass, especially to the uninitiated, such a self-indulged mastery can be too rich, like syrup on custard. But after the first gooey bite, this too can become addicting.

One of the most striking objects in the show is a Nautilus Cup made in Holland around 1595. The body of the cup is a silver shell, added later as a replacement for the real shell that first provided the cup. It is surmounted by a fierce sea monster, rich with detail. The pedestal of the cup is a mermaid figure, who rides on the back of a griffin-headed snail. The tortuous interplay of forms and lavish details are precursors to Baroque architecture that was still 100 years in the future. In many ways this piece typifies the collection. It is ornate, magnificent, convoluted, tempestuous and pretentious. It is larger than life, containing decades of skill and centuries of meaning in its compact 11 inches.

Another of my favorites was a combined knife and spoon made in the late 16th century in Southern Germany. A miniature St. George stands on the shaft ready to slay a diminutive and perfectly carved half-inch dragon. Gargoyles and other figures abound. The two tines of the fork engage with a carved female figure on the back of the spoon bowl to convert fork to spoon. The ornate globe on the top acts as a handle to release a central shaft that contains a whistle, a toothpick and an earpick. The catalog catches it nicely: "In its sophistication and impracticality, this object is an epitome of Mannerist goldsmiths' work. Ostensibly intended for ordinary use, its complex molding make it quite inappropriate for eating with, while its decorative program and ingenious combination of functions are best appreciated by examination rather than use."

And what about time travel? No working metalsmith could study these undulating forms without marveling at the technique. These thoughts quickly lead to musing on the tools that were used, and soon we are visited with a vision of the Renaissance goldsmith at his work. What was at first glance awesome becomes almost spooky. I found it possible to sense the men who made these objects—in fact almost impossible not to. It was as if a narrow starry corridor opened for an instant. If one of these master goldsmiths was to materialize there in the gallery, we could chat. I'd love to hear about his tricks, and wouldn't it be fun to take him on a tour around the rest of the museum. That's not going to happen, but for an instant the glimmer was there; the clocks lost a second.

This exhibition will be on display at the Toledo Museum of Art in Toledo, Ohio from January 12 to March 9, and at the Denver Art Museum in Denver, Colorado from April 6 through June 1. Check with each museum to confirm these dates.

A 208-page catalog is available from any of the participating museums or by sending $12 plus $1 handling to the American Federation of Arts, 41 East 65th Street, New York, NY 10021.

Above: *Chalice*, probably South German, silver gilt, niello, 5⅞" h., c. 1180; **below:** *Tazza*, probably Halian, silver gilt, 17 × 15", c. 1550–60; The Schroder Collection, courtesy: Worcester Art Museum

Jonathan Graham Bonner
Dawson Gallery, Rochester, NY
October–November, 1985
by William Baran-Mickle

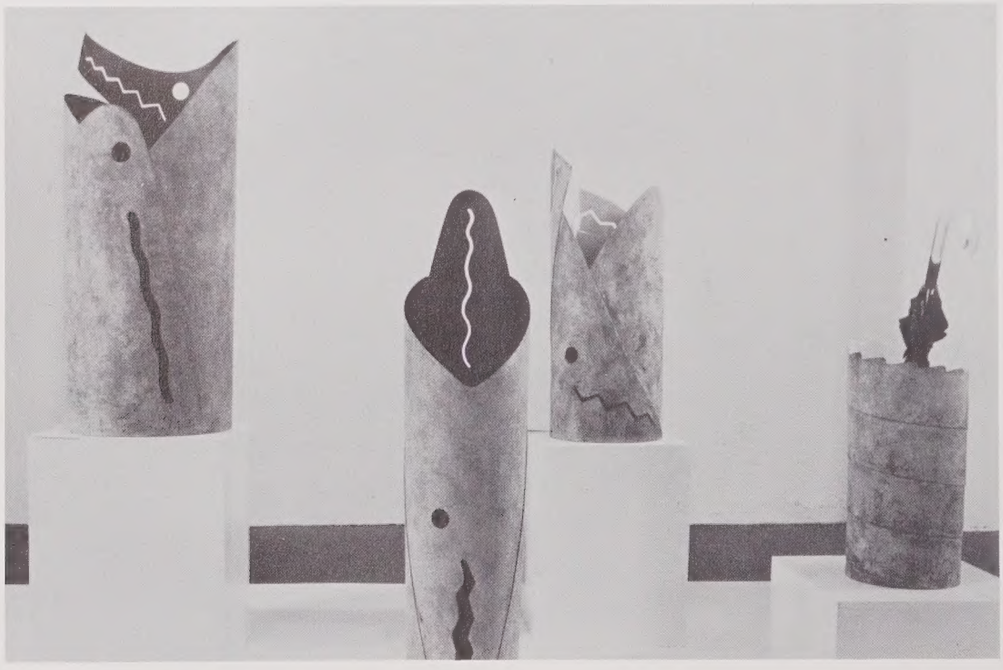
Jonathan Bonner's recent solo exhibition was an elegant presentation of weathervanes and umbrella stands. Though sparse, the range included past, present and a hint at the future. Most noticeable to me at first were the familiar jagged profiles of animal-like forms. While these forms echo the Surreal style of Klee or Calder on one hand, they also parallel recent figurative-expressionist art, more humorous than urgent, often whimsical and friendly. Several large-finned fish forms made a good visual transition to the umbrella stands.

The weathervanes stood 5 to 6 feet with a 3 to 5 foot breadth of fish or animal floating high above the ground. Each had a unique, approximately 3-foot high base of wood cut in an architectural, post modern form. The faded, dye-colored bases worked well with the fume-green patina on the metal bodies. Most of Bonner's vanes made me feel as though I, as viewer, completed the sculptural statement.

The umbrella stands were of a newer style, softened and more relaxed. There seemed to be more playfulness, and the images were more like dolphins and snails. Wavy lines and overlapping seams create an undulating pattern as the work is rotated, and the images change substantially—the fume-green patina playing off the opaque-lacquered interiors of pink, yellow and red. These pieces revealed a strong resemblance to the style and method of John Prip, Bonner's former teacher at RISD, a method where work is designed with paper cutouts, folding, simple piercing of stylized form and so on. This method allows clever and ingenious forms and relationships to evolve from only one or two pieces of material. Execution must be flawless, as the final material is secondary, and here Bonner's skill is apparent.

Bonner exhibited just one piece that seemed to point toward a future direction. Still a weathervane, this one stands 5 feet tall with a span of 2 feet. Its gently curving base—left natural—supports the fulcrum, on top of which is a tilting oblong football shape in profile. Heavily painted white, with a red/black line wandering from tip to tip, this vane is purely abstract and no longer needs a "functional" aspect. It embodies an allusion to movement and added dimension with more sculptural depth: the winds are stilled. This direction would seem to realign Bonner from a more popular format to a stronger, and more challenging, mature artistic expression.

Below and bottom: Johnathan Bonner, *Umbrella Stands*, metal, patina, lacquer, each approx. 2½ × 4 × 1½'. Photos: W. Baran-Mickle



Johanna Hess-Dahm
VO Galerie, Washington, D.C.
Fall, 1985
by Gretchen Raber

Clear, concise, logical flow the thoughts of Johanna Hess-Dahm. Each idea is channeled and dissected. Her work is a product of categorized intellectual energy, manipulated into progressions. The results arise from each seminal idea. Her exhibit at VO Galerie was another striking example of the precise and directed exploration certain European metalsmiths invest in their work. Not only did each group of work reflect an intention, but also the artist herself expressed with such fluidity the pattern of development. It has been my experience that these recognized young European metal artists express their creative energy from the standpoint of their intellectual process. As in the case of Herman Hermsen, Herman Jünger and Johanna Hess-Dahm, such conviction and exhaustive research into each facet of design is an important lesson to those who seek lasting and catholic power in their own work.

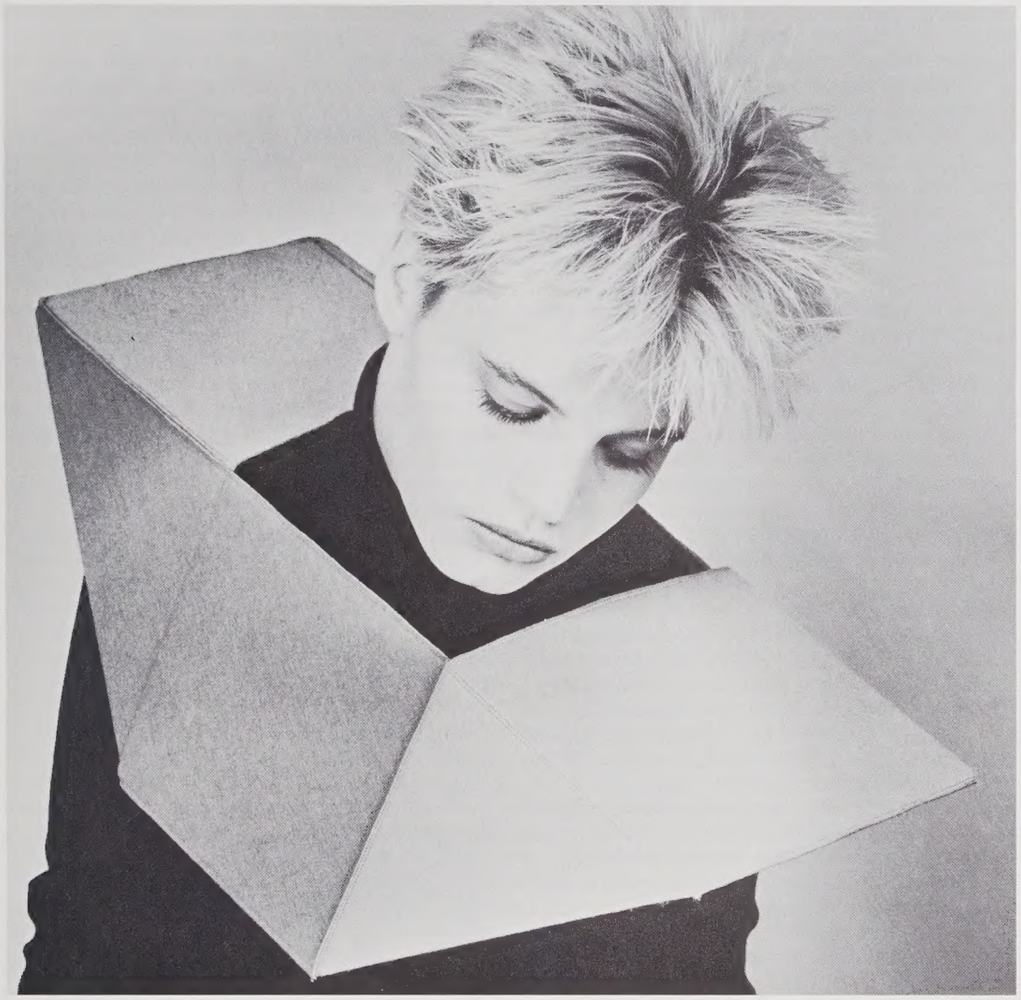
Hess-Dahm began her involvement in metal from an art backgound in Zurich. Within that sphere of design, she found the lure of metal and its qualities of resistance, energy potential and strength suited the direction of her expression. The evolution of her studies progressed to more intense involvement with the third dimension.

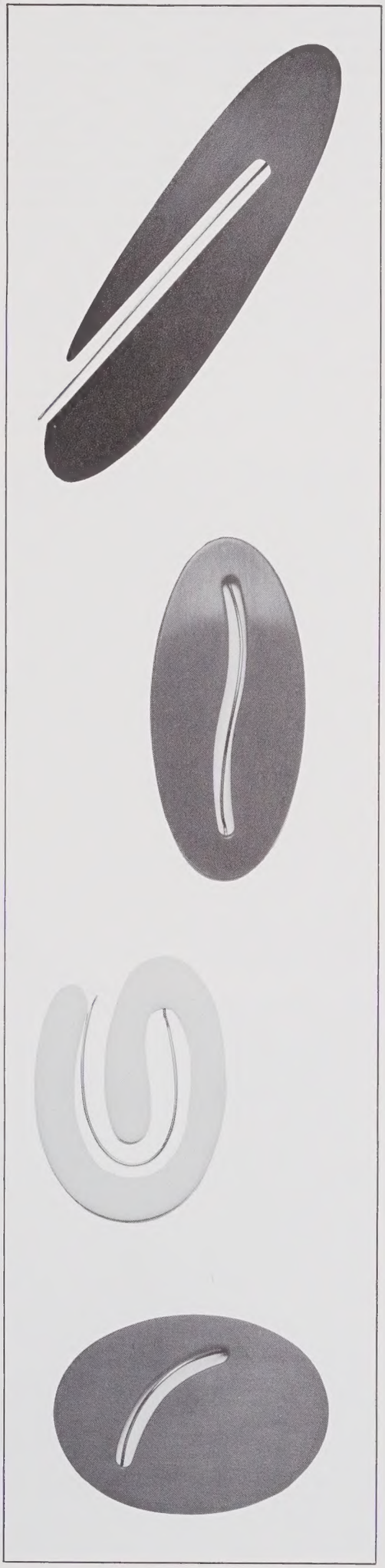
In this show, Hess-Dahm departed from her earlier work of flat, illusionistic volumes based on rectangles, squares and circles. Her new work evolves from concepts developed in 1981 at a symposium on metal and textiles sponsored by the World Craft Council. From this point, she has explored integrating fabric with her work. She seeks to hold and mold the fabric with metal structures. In many cases the attaching needle is used as a form-producing element. The plastic front sections of one series are opened in part to allow the pin to protrude. Thus, the fabric is stretched over the needle surrounded by the brooch. This idea generated from the concept of a paper-clip mechanism. Convex and concave polarity occurs in this work in groups of pieces that include pure wire forms, metal plates with wire and plastic forms, over which elastic bands hold the forms to fabric from the back. The apparent simplicity of the shapes is quite misleading. There is a great sophistication in engineering that reduces a mechanism to its simplest form and still works. The challenge is to produce maximum results with the purest of elements. That is the mark of an experienced and talented designer.

In one of the latest groups of work is a necklace based on sections of squares and circles. Heavy chromed brass tubes of circle segments are alternately strung on elastic cord with chromed half-squares. The metal sections can be positioned in different attitudes both on the wearer and as standing metal sculpture.

Johanna Hess-Dahm's latest medium is felt in large, stiff, geometric, folded planes, which can be manipulated on the wearer or on the wall. They make a dramatic fashion statement. Hess-Dahm, however, does not approach their design from that direction, but rather from the landscape of the mind, rarified and pure. Her work is not static; it is powerful, honest, direct, thought-provoking and, yes, starkly beautiful.

Opposite page—right: Johanna Hess-Dahm, *Neckpiece*, felt, wine, **far right:** *Pins*, colored plexiglass, steel, 2½ to 4". Photo: Alexander Troehler





Spectacular Helmets of Japan, 16th–19th Century
Japan House Gallery, New York City
October 17–November 27, 1985
by James McElhinney

Sixteenth-century Japan was a land in chaos. The period known as Sengoku-jidai (period of the country at war) saw the utter collapse of the military government that had, two centuries past, been established by the Ashikaga family. What passed for government in these times consisted of a number of contentious provincial clans ruled by charismatic warlords, each of whom shared the same dream of one day founding a new Shogunate under which the entire military community would serve. These men, known as Daimyō (meaning, literally "great name"), represented the expression of a kind of individualism rarely associated with the Japanese martial spirit. It was necessary for these men to possess the ability to inspire the sort of loyalty for which samurai were readily willing to give up their lives. An appearance by the Daimyō in the thick of battle at a critical moment could turn the tide and carry the day. Like sports stars of today, the Daimyō relied heavily on mass appeal. They were expected to be dynamic, colorful and readily indentifiable in the field. They were also expected to be well versed in the arts; both in practice and connoisseurship. Like European princes during the Renaissance, the Sengoku Daimyō sought to master far more than those skills required of a military commander or provincial ruler. The martial costume of the day was Yoroi (armour) composed of thin steel plates laced together with braided silk tape. This provided the wearer with a strong, flexible and lightweight defense against arrows and edged weapons. The helmet, more than any other component of the Yoroi served to express the identity of the warrior. The traditional helmet, or Kabuto, was comprised of the Hachi, or helmet bowl, from which was suspended the Shikoro, or neck guard. The latter formed somewhat of a low brim encompassing the back of the helmet. On either side of the frong of the hachi, near the base, were two small flaps (Fukigaeshi), which at one time had been part of the shikoro. By the Sengoku period, they had become vestigial and ornamental. A variety of ornaments might be affixed to the hachi that would express the religious beliefs and clan affiliations of the wearer. Little changed, however, in the traditional form of the hachi until the Sengoku-jidai. It was during this time that the great Daimyō gathered together armourers into the castle-towns, providing for them the patronage and encouragement to explore new ideas and develop new designs for the construction of helmets and armour. The results of some of this effort were recently exhibited at the Japan House in New York. "The Spectacular Helmets of Japan," as an exhibition, provided a rare opportunity to see many of the best-preserved examples of the most imaginative and original works of the Japanese armourer.

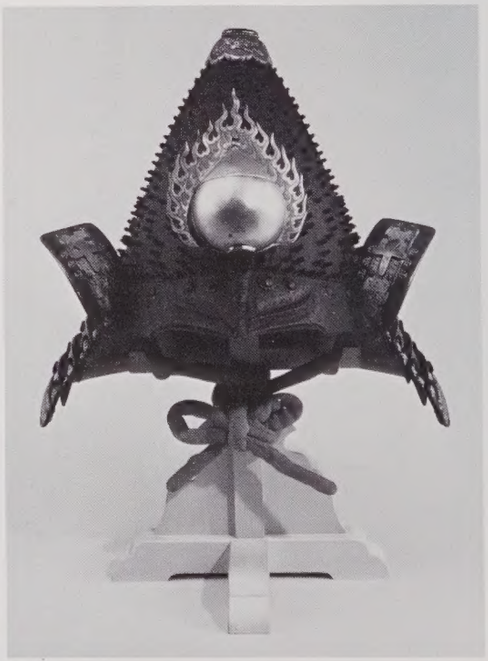
In one example, the hachi is constructed by the traditional method of joining longitudinal steel plates with rivets. From the hachi is suspended a shikoro of lacquered iron laced with a multicolored silk tape. The fukigaeshi are covered with printed deerskin and affixed with the "Ju-mon" (the Chinese character signifying the number 10). The Ju-mon was used by certain Daimyō as a family crest, notably the Shimazu, lords of Satsuma in Kyushu. Affixed to the front of the hachi is the "Cintanami no Tama" or wish-giving jewel, which would have served the wearer as a talisman and symbol of his religious convictions.

Another example, known as Mōsu-gata-kabuto or Monk's-hood shape, finds expression by making use of the overall form of the kabuto, not simply by adding accessories to the hachi. The form, which is inspired by the cloth hood worn by Yamabushi or warrior-monks, was built up with layers of lacquer and paper over an armature of wood atop an iron hachi. This technique, known as "Harikake" allows the armourer to express the form of the kabuto with great sculptural freedom, while not doing so entirely in metal. Harikake is very lightweight and there can be little doubt that one major consideration for the armourer would be the comfort of the wearer. Despite the fact that harikake is not a metalworking technique, it is used in concert with metals and employs a vocabulary of form based on metalworking. The nature of the volumes expressed in this kabuto strongly resembles those which might be raised from a flat sheet of metal. Similarly, the surface treatment, intended to convey the texture of cloth, could as easily be read as a hammered surface.

Similar issues are revealed in another example, which is formed to represent sutra-scrolls. Again, religious sentiment is expressed with the entire form of the helmet, suggesting the belief that redemption is to be found in adherence to Buddhist law. The simplicity of design in no way diminishes its sophistication. The language of form is based on metalworking but the technique is again Harikake. Like the previous example, harikake is built up over a functional iron hachi. The Daimyō used their headgear to set themselves apart from ordinary mortals, but rarely would they choose to do so at the expense of their own safety.

Following the unification of Japan under the Tokugawa family, numerous sumptuary edicts were proclaimed that dictated in exact terms the mode of conduct and of dress to be followed by all members of the military class. The flamboyance of "Kawari-Kabuto" (spectacular helmets) came to represent a kind of vanity and individualism that was, in the light of these laws, considered somewhat undignified and inappropriate to the "way of the samurai" (Bushido). Despite the official policy, Kawari-Kabuto continued to occupy a place in the military culture of Japan, until the Shogunate was overthrown by the Meiji Emperor in the 19th century.

These helmets provide for us more than just a glimpse into the nature of a society that no longer exists. They are evidence of the inventiveness and genius of the armourers of feudal Japan, who are well represented by this exhibition.



Left: *Helmet ornamented with the Buddhist wish-granting jewel,* Momoyama period, late 16th century, iron, gilt copper, 26 cm h. Collection: Saburō Makita, Tokyo **below:** *Helmet in the form of a Zen priest's hood,* early Edo period, early 17th century, iron, black and red lacquer on *Harikake,* 23.4 cm h. Collection: Fukuoka City Museum

New Talent
Plum Gallery, Kensington, MD
December, 1985
by Jan Maddox

Diversity of style, technique and personality were coupled with a common commitment to color and the wearability of the object in the work of five local designers: Tina Chisena, Joan Levy, Carol Oshinsky, Jan Peters and Don Smith. To a great extent they are representative of the interests of the local jewelry community in fashion, form, technique, material and function.

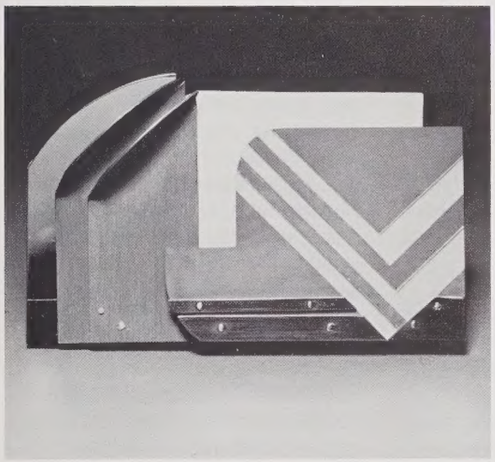
Tina Chisena takes several techniques that lend themselves to linear surface decoration and incorporates them into sensitive sculptural form. Her sterling silver and niello earrings had an elegant flowing shape, enhanced by the curving niello lines that both emphasize and counterpoint the movement of the total form. Although seen in a case, these pieces come alive when worn because Chisena has subtly involved the function as an important design element. Her work is characterized by its small scale, intricate design and careful craftsmanship. Whether using cloisonné, mokume-gane, niello or other media, she explores the lively graphic potential of each.

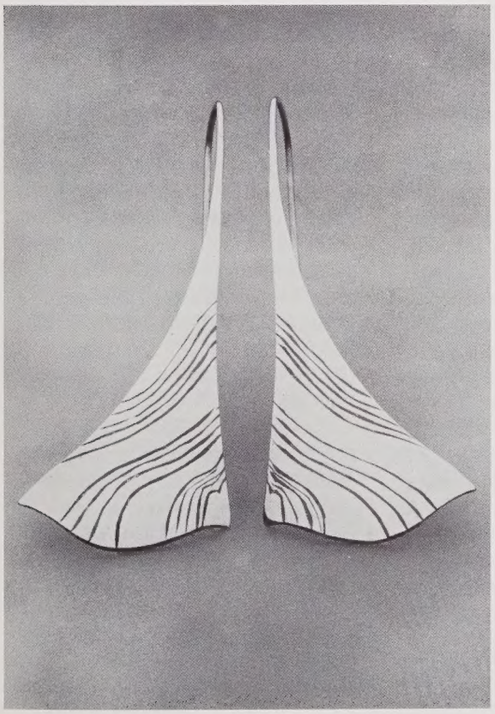
Flowers provide a central motif for Joan Levy's work. Not delicate, fragile little blossoms but expansive, exuberant and full-blown hothouse blooms. Large in scale, active in texture, form and color, some of the pieces are so involved and agitated that the viewer is overwhelmed and visually exhausted. The best pieces are consistently lively and decorative in a personal way. Her "Paisley" belt buckles and shawl-sweater pins are notable in successfully incorporating the function into the form. A "Poppy" necklace successfully combined a simple nickel shape with gray silk ribbons and small, pierced and formed petals sprinkled among the ribbons.

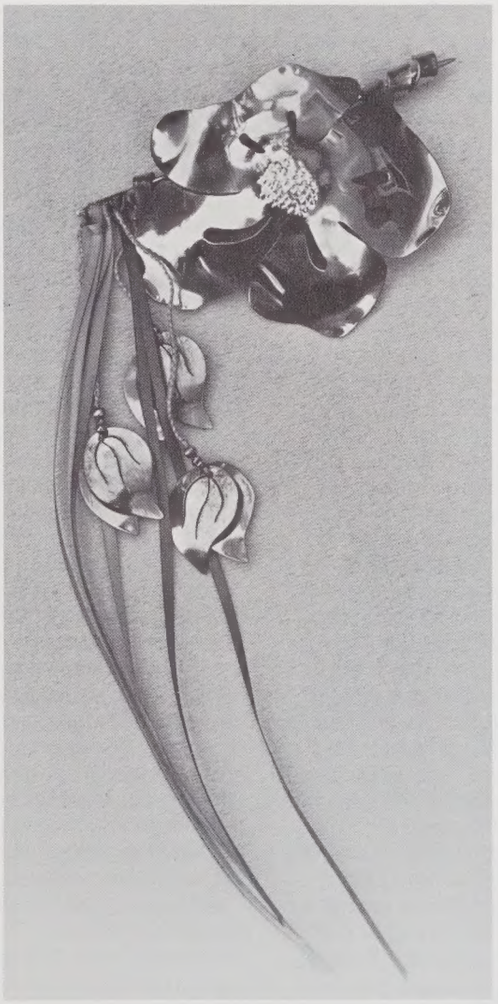
The work of Carol Oshinsky shows an obvious interest in fashion. Very "stylish," her pieces are well-made and effectively designed variations on a basic theme. She uses a series of large, flattened spheres, either plain or embellished with oxidation or simple wire lines. One necklace used the spheres in a vertical orientation with graduated sizes changing from three large central beads to slightly smaller heat-oxidized copper shapes. Another necklace and earrings used the spheres on their flat sides with three raised lines of silver wire, oxidized to stress the strong geometric interruption of the form. It is a striking motif, adaptable to various functions, varied in color through oxidation or combinations of different metals and sometimes combined with small hematite or garnet beads to reduce the inevitable bulky character of the large circular shapes.

Crisp, clean geometric form and meticulous craftsmanship mark the work of Jan Peters. But her geometry is enlivened by the asymmetrical organization and careful balancing of contrasts within each object. Most of her pieces are constructed with a series of overlapping interrupted layers of angles and arcs with brushed and highly polished surfaces, as well as color from titanium, niobium or anodized aluminum. In the brooch *Curves, Angles and Folds*, projecting edges give three-dimensionality to an otherwise flat image. She has been very inventive in using segmentation of line, color and unexpected juxtapositions to animate her design concepts.

Don Smith's work included several very different design approaches using aluminum, sterling and niobium, usually in combination. His most successful pieces were pins of simple, open, geometric shapes of distressed anodized aluminum rods held together with silver tubing corners. The most pleasing is a triangle with close, dark colors—black, blue-purple and purple. It made a simple but satisfying linear statement with the silver color of the scratched anodized surface and the closely analogous colors acting in harmony with the silver sections. In a very different piece, he uses a relatively stiff computer cable for the neckpiece of a small silver and niobium pendant in order to hold it in an eccentric position on the body.







Left top: Jan Peters *Curves, Angles, Folds*, brooch, anodized aluminum, nickel silver. Photo: Richard Rodrigues. **left bottom:** Tina Chisena, *Earrings*, sterling silver, niello, 2¾ × 1⅛". Photo: William L. Branson **center:** Joan Levy, *Shawl-sweater pin*, nickel silver, nu-gold, ribbon trim, 3 × 5 × 9". Photo: Jonathan Levy **below:** Carol Oshinsky, *Necklace*, sterling and fine silver, hermatite beads. Photo: Roberta Solit **bottom:** Carol Oshinsky, *Necklace*, oxydized copper, brass, silver. Photo: Roberta Solit

Books

The Art of the Jeweler
A Catalogue of the Hull Grundy Gift to the British Museum: Jewelry, Engraved Gems and Goldsmiths' Work
Edited by Hugh Tait
British Museum Publications, Ltd., London, 1984. Two Volumes: Vol. 1: Text, 271 pp. Vol. 2: Plates, 319 pp. £150, U.K.

First, let me say that writing a review of a pair of books that cost £150 strikes me as a somewhat awesome enterprise. I cannot casually suggest you go out and buy it only to let it languish for a while on your coffee table. Second, I do believe that this work belongs in at least the library of a school that takes the teaching of jewelry making seriously.

In its bare outlines, the story of how this work came to be produced is this: Over a period of many years, Prof. and Mrs. Hull Grundy amassed a very fine collection of about 1200 pieces of jewelry that roughly spans the period 1700 to 1950. Most of the work is English and European, some Far Eastern, some American. Mrs. Hull Grundy was not just buying nice things indiscriminately. Her acquisitions were meticulously made within a well-thought-out art-historical framework and her knowledge of the field was honed finely enough to enable her to write numerous scholarly articles on many aspects of the history of jewelry.

In 1978 Prof. and Mrs. Hull Grundy presented the entire collection, along with a wealth of related literature, to the British Museum. In itself, the gift was significant. Its importance is enhanced because it neatly fills a historical gap of some 250 years in the Museum's prodigious jewelry collection; a collection which ends at about 1700, the time when the Hull Grundy collection begins.

The importance of the size, the quality, the completeness and the period covered by the Hull Grundy collection could only be expressed and made available to scholars and artists through the production of a complete catalogue, and that is the subject of this review.

Volume 1, which consists only of text, includes the usual introductory material, a fine bibliography, a glossary of jewelry terms, an index of signatures, makers'marks, manufacturers'marks, retailers'marks, inscriptions and a general index. Most important, there is the catalogue material itself. The collection has been organized into 14 categories, each one of which represents what may be called a chapter. Typical categories are: Iron, Steel and Marcasite, Late 18th–20th centuries; Enamelling and Painted Miniatures; The Art of the Goldsmith.

Turning to a given chapter, one will find an introduction followed by an exhaustive description of each object. The chapters are further subdivided into groupings. For example, in the chapter called "The Art of the Goldsmith," the subgroups are: Engraving on Silver, Filigree Work in Silver and Gold, Boxes and Containers in the Oriental Style, Containers and Implements, Watches, Chatelaines and Other Accessories in Colored Gold, Hardstone and Shell, Boxes; Gold, Silver and Tortoise Shell, The Art of Pique.

Each object's catalogue entry consists of: 1) A brief description of the piece, similar to what may be found in an auction catalogue. 2) Dimensions, country of origin and date of manufacture. 3) Plate number, if the piece is illustrated in color. 4) Bibliographical reference, if the piece has appeared in publications elsewhere. 5) Notes. Items 1 through 4 are the straightforward, mechanical information one would expect of any properly written catalogue. Ah, but those notes!

The notes are what made it difficult for me to put the book down. Who reads a catalogue as if it were a compelling page-turner? Possibly you will. Here is where the authors release the encyclopedic knowledge they have about most of the pieces. In addition, the writing style, while not folksy, is less formal than the plain catalogue description that comes before. Most of the time I found the notes to be downright entertaining. Where included, the notes range in length from a short sentence to about a half-page or more and include a very wide variety of information about the history of the piece, its materials, construction and design, meaning of the symbols, related pieces, who owned it, education and career of the designer and just about anything else that is remotely relevant, including a discussion of how the object fit into the social, political, economic and religious context of the period and place of its origin. If you get high on knowledge and like seeing jewelry written about as if it is a significant part of a civilization's fabric rather than an isolated, unrelated, income-oriented appendage, then you will enjoy and benefit from studying these books.

Speaking of studying, you will need lots of desk space in order to do it. These are large books (9″ × 11″) and you will have to have them both open and in front of you at the same time because one has the text and the other has the pictures. This is good practice for watching the ball at tennis matches.
—Bernard Bernstein

Bead Setting Diamonds, with Pavé Applications
by Robert R. Wooding
Dry Ridge Company, P.O. Box 18814, Erlanger, KY 41018, 1985, 192 pp. $29.95

In 1984, Robert Wooding wrote a highly successful book called *Diamond Setting, The Professional Approach* (reviewed in *Metalsmith,* Spring, 85, p. 51). This most recent contribution is a companion to that volume.

Bead Setting, like its predecessor, is a specific manual for the benchworker. The organization of the book is logical and direct. The fact that it reads like a course syllabus is not a surprise. That the author is a teacher shows on every page.

The book is divided into three sections. The first covers the tools needed for diamond setting and their preparation for use. The second describes the steps involved in bead setting. Through many photographs and drawings the process is described in great detail. Included are chapters on layout, marking, drilling, cutting, raising beads, engraving and finishing. The prose is not fancy, nor the presentation exotic, but the material is methodically, exhaustively covered.

The third section describes "case histories" of specific applications of bead setting. Included is a single stone in a square mount, a triangular plate, a marquis plate, a round cluster, a hexagon, row settings and several examples of pavé. In each instance the process of finishing a popular piece of jewelry is shown, from the time it arrives at the stone setter's bench to the final result. This step-by-step approach would seem to leave little room for error. Any competent craftsman, reading carefully and following the clear instructions, will learn this valuable skill.

Getting a clear photograph of reflective gems on a shiny surface at great magnification is always difficult. The reader hoping to skip through the text and pick up all the information needed through photos and captions is cautioned. To those reading along, the photos are adequate. I found the drawings clear and helpful.

Diamond setting is not everyone's first love (though it is clearly Mr. Wooding's). To his credit, the author does not seek to win converts. Rather, he writes for those jewelers who are already fascinated by the clean sparkle of a well-set diamond and who want to learn how to do it. That kind of jeweler will find *Bead Setting* a welcome addition to his or her library.
—Tim McCreight

Custom Knifemaking: 10 Projects From a Master Craftsman
by Tim McCreight
Stockpole Books, 1985, 224 pp., 75 photos, 100 line drawings, pb, $14.95

The concept of Tim McCreight's newest book is that each of the 10 projects, starting with a kitchen paring knife and proceeding to a Damascus steel dagger, is slightly more difficult than the preceding one. Each project is cross-referenced, so that someone starting with, say, project four, which is a through-tang skinner using antler as a handle material, may be referred ahead to project six to see a through-tang knife using leather as a handle material, or back to an earlier chapter to check on heat treating. Each project starts with a general overview including a list of the new skills it teaches (project four teaches threading, stamping and the use of antler). There is a materials list, process overview, design consideration and process detail given for each knife. This organization is the strong point of the book. It should be noted that although the author states that experienced knifemakers can use it to generate fresh ideas, the book is aimed primarily at beginners. The projects, together with the initial chapters on tools, materials, sheathmaking, and so on, provide an easily understood, broad introduction to knifemaking.

Custom Knifemaking is written in a personal, one-to-one style that places emphasis on uniqueness. Sentences like, "I did it this way but you can do it that way" occur in many places. Each project is accompanied by a series of alternative design ideas tht alert the reader to the potential wealth of knife design. In a discipline where

many of the participants—even many of the well-known custom knifemakers—repeat the same, tired designs, this is particularly refreshing.

Other sections that make the book valuable, especially for those with less experience, include a straightforward, clear explanation of steel, carbon content and what happens during heat treatment. The no-nonsense approach to making folding knives, which can be a remarkably distressing experience in itself, is a welcome part of this book.

If the book can be taken to task, it is because of what at times amounts to oversimplification and/or omissions. The description of popular knife steels, for example, dismisses air-hardening steel (A-2) as being more difficult to use than oil-hardening. Yet A-2 is usually considered to be the better knife steel of the two because it has better toughness, better corrosion resistance, higher hardness at quench and so on. It is more expensive than O-1 and requires more sophisticated heat treatment but, then, the same can be said of 440-C and 154-CM, both of which the author does include. Micarta is another material that seems to be slighted, with nothing being said about the paper or canvas types, only the linen. When soft solder is mentioned, there is a failure to point out that not all soft solders contain lead. Eutectic's 157 does not contain lead, nor cadmium nor zinc, for that matter. Actually, it has a small percentage of silver but the point is that it is a good choice for knifemakers, especially if the knife will be used with food, but it appears to have been overlooked. Finally, in more than one place the author states that, if in the heat treating process the blade is over tempered, it can be reharded-ened and retempered. A more detailed discussion would reveal that because of stresses set up during heat treating the blade should be annealed before being rehardened. Otherwise, cracking can result from too much stress build-up.

When these over-simplifications and omissions are weighed against the concept and organization of the book and against its emphasis on individual/alternative designs, *Custom Knifemaking* comes out being a good book for the beginning knifemaker as well as a worthy library addition for any metals person about to enter the knifemaking arena.
—Ken Coleman

Pearls: Their Origin, Treatment & Identification
by Jean Taburiaux
N.A.G. Press, Suffolk, England, 1985 (translated from French by David Ceriog-Hughes).
238 pp. £14.95

Did you know that blister pearls can be formed over tiny crabs? Or that the cores upon which cultured pearls form are cut from a Mississippi River mussel? Do you care? Well, me either, I guess, but it's interesting all the same. Those kinds of facts, as well as dozens of reminiscences and field observations give this book its unique flavor.

Despite its compact size, *Pearls* covers every imaginable aspect of this gem. The author describes the various bivalves that create pearls, where they live, what they eat and how they are gathered and sold. If there was a secret life to a "pinctada maxima" (the preferred pearl oyster), it would be here. Here you'll find complicated scientific explanations of the nacre-forming process. Here too are stories about famous pearls and anecdotes about notorious pearl merchants. The extraction, preparation and marketing of pearls are covered as well. There's even a technical report on a model pearl farm in the Philippines.

When I got in tune with the peculiar outlook of this book, I enjoyed its eccentricity. There can be no doubt that the author is committed heart and soul to his subject. His flamboyant enthusiasm for every detail concerning pearls is refreshing in an offbeat way.

The physical quality of the book is uneven. It sports what is arguably the ugliest cover I've ever seen. The jacket shows a Man Ray-esque hand reaching out at us from a puddle of pearls. The writing, perhaps because of translation, is choppy. These complaints are outweighed by delightful and informative illustrations by Jean-Paul Ehrmann. The eight pages of color photos are sumptuously reproduced.

Not what you'd call a coffeetable book, this volume is more at home in a den than a studio. A pearl lover will enjoy it cover to cover, and a jeweler, after reading it, will never look at pearls in quite the same way.
—Tim McCreight

Technical Briefs

Firescale
by Tim McCreight

Dear Tim:
I have been plagued by firescale that appears after machine polishing. I've read articles on the subject but nothing solves the problem. Abrasion removes the scale but is time consuming and wastes metal. If you have a safe, quick and reliable method, I would be most appreciative.
—M. Walter
Flushing, NY

Your use of the word "plague" in connection with firescale is familiar. Your frustration has been shared by many smiths over the years. Other articles in this magazine have described in detail the complex reaction that causes firescale. I can't improve on those reports, but for the benefit of recent readers let me begin by summarizing.

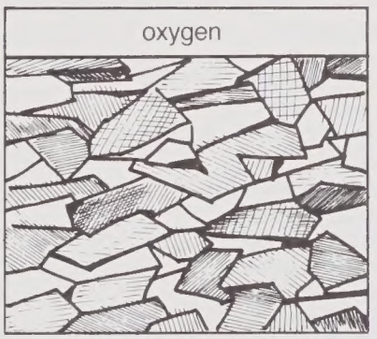
Firescale is produced at high temperatures in the presence of oxygen. The rate of its penetration is influenced by the length of time the metal is kept at elevated temperatures. Oxygen combines with copper to form the blackish compound *cupric oxide,* CuO, and the reddish *cuprous oxide,* Cu_2O. Firescale is formed when increased energy (in the form of heat) encourages the formation of copper oxides. In sterling and some gold alloys this can result in stains within the metal.

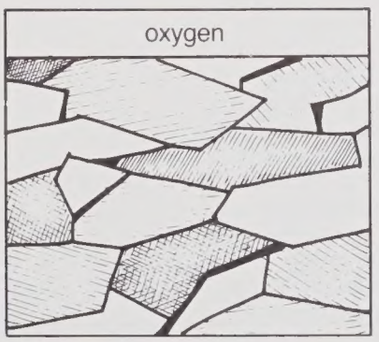
I know of no good way of removing firescale. The stain is a contamination within the metal; there is no solution but to dig it out or cover it up. Plating over stain has the disadvantage of potentially wearing off articles that are to be worn.

Further, when it comes to digging the stain out, no method is a good one. As you mention, sanding is time-consuming and wasteful. An alternative that is sometimes preferred for heavily textured surfaces is called *bright dipping.* This technique uses a strong acid solution (usually nitric/water, 3/1) to remove the metal down to the stain. This is faster than sanding but is no less wasteful of metal. Because the acid attacks solder faster than sterling, this method poses special problems for objects fabricated from many units.

The best solution to the problem of firescale is to control and minimize the factors that create it in the first place. Proper use of the torch can go a long way toward keeping firescale under control.

Heat the workpiece only to the point where solder will flow. Remember that it might take a brief time for heat to flow completely through a piece. Think of soldering in terms of heating by stages. Warm the whole piece to 1100°F. This is indicated when Handy Flux loses its reddish brown color and becomes colorless. Lift the torch an inch or so for a split second to allow the heat to





In the example **Above**, the numerous grain boundaries slow down the flow of oxygen into the metal. **Below**, The large grains facilitate the infusion of oxygen.

soak through the workpiece, then continue heating. Heat to a dull, barely perceptible red, then again lift the torch very slightly for a couple seconds to allow heat to soak throughout the workpiece. Continue in this way until the metal is brought to the point of solder flow. Then stop. Do not heat the metal above this point. This subtle process is better than heating the metal in a headlong rush. Focusing the flame on a single point until the solder flows will probably overheat some sections. At the same time, avoid prolonged heat. The stage-by-stage approach to soldering is relaxed but should not be drawn out too long. Use a flame large enough to complete the job efficiently.

The soldering heat should be a neutral or reducing flame. This refers to the relative volumes of fuel and oxygen around the flame. In a neutral flame most of the oxygen in the vicinity is being consumed in the fire. In a reducing flame excess fuel is present to "mop up" surplus oxygen. Working in a reducing environment, for instance on a charcoal block, increases this effect.

The real bad guy in the firescale scenario is oxygen. Proper soldering will limit the amount of oxygen that reaches the surface of the metal. This is achieved commercially with furnaces that produce an inert atmosphere such as argon gas. Annealing is often done in liquid salt.

Handcrafters rely on the chemical action of flux. You might think of flux as a sponge that picks up oxygen before it can get to the metal. Some fluxes are better at absorbing oxygen than others. The watery, fluoride-based fluxes like Battern's (these are usually green or yellow) are light-duty fluxes. They are best suited for quick operations on metals such as gold or fine silver that are not prone to heavy oxidization. Paste flux, of which Handy Flux is the most popular example, offers better protection against the penetration of oxygen. For soldering jobs that require a good deal of heat for a sustained time, apply a thick layer of flux. An example of this would be a large sterling object being joined with hard solder.

Fluxes that combine trisodium phosphate, borax and boric acid create a tough shield against oxidation. *Prip's flux* and *Cupronil* are examples of this kind of flux. These are best applied by spraying. Warm the metal with a soft flame and spray on the flux. It should make a white crust as it hits the metal. Reheat and spray again. Work in a ventilated area and avoid breathing the fumes being created. Continue this operation at least five times, until the crusty coating is uniform and about a millimeter thick. Since this flux does not aid solder flow, many smiths brush a line of paste flux along the seam. Soldering is then completed as usual. Warm pickle will be needed to remove the flux layer.

At temperatures above 1100°F. the silver in sterling facilitates the movement of oxygen through the alloy.* Oxygen flows better through silver than copper oxides. Grain boundaries in sterling harbor the oxides. As shown, large-grained structures present fewer barriers to slow down the spread of oxygen. They are more susceptible to firescale than finer grained samples. Large grains are created by prolonged high temperatures. This is one of the reasons to keep soldering and annealing operations as brief as possible.

*"High Temperature Oxidation of Sterling Silver". Joe A. Hall, MFA Thesis, 1981.

Send questions for this column (double-spaced, typewritten) to: Tim McCreight, 23 Mill Road Circle, Boylston, MA 01505.

on the jewelers bench and can be hardened and tempered in an electric burnout oven. These tools can then be used against Flexane or K-prene polyurethane. For smaller work an arbor press or screw press (fly press) works well. They are inexpensive and safer to use because they do not require hand/foot coordination.

I would encourage metal artists to look more into machines. Don't be discouraged by old machinists who can only see one expensive way to do tooling; they are used to building tooling designed for a million parts, and the cost can run more than the retail value of the jewelry intended to be made. We need low-cost, short-run tooling and quick turnaround. We are metalsmiths and we can work any kind of metal including tools, and if we use our ingenuity and can-do attitude these machines can make us a lot of money and save production time—time that could be used for more creative endeavors.

Dear Editor:
In a letter published in *Metalsmith* Spring 85, I commented that I must have seen a different "Jewelry USA" exhibition in the Summer of 1984 than your critic, Linda Norden. Now I find that not only do you clever Americans run phantom exhibitions but that the *Metalsmith* distributed in the U.S.A. has a different text in some of the letters to those which appear in editions sent here. I refer of course to the extraordinary comments in *Metalsmith* Fall 85 in a letter from Curtis La Follette on a letter purported to have been written by me and published in the *Metalsmith* Spring 85. I would be fascinated to see the letter Curtis is talking about, perhaps it was written by Brother Jonathan, certainly my letter contained none of the sentiments he complains of. With regard to 1812, surely this was a minor battle in a larger war in Europe which we finally won in 1815 at Waterloo—without American help that time.
—Peter Gainsbury, Director, Design and Technology Goldsmiths' Hall, London

Barbara O. Rockefeller 1930–1986

Barbara Rockefeller, founder of Barbara Rockefeller Jewelry Co. and former Trustee and Chairman of the Board of the American Craft Council, died on January 21, 1986 at Memorial Sloane-Kettering Cancer Center.

"Barbara Rockefeller has passed away, unexpectedly. Few, aside from her family, knew of her disease, for it was not her manner to dwell on the negative. She chose to live as full a life as possible to the end.

"The name alone was part of American legend—intimidating, mythical, but instead Barbara was warm and accessible, a dear and special person, generous and giving. Her manner was one of quiet elegance. She was, above all, a lady.

"I first knew Barbara Rockefeller as my patron, and then as my dealer, but, finally, as my friend. I will miss her most as my friend."
—William Harper

Carol Kramer 1918–1986

Carol Kramer was born in Brooklyn in 1918. A beautiful woman, she was working as a model when she met Sam Kramer. She took up jewelry, married Sam and together they opened The Studio of Sam Kramer in 1940. Widely acknowledged by contemporary accounts to be a talented jeweler in her own right, she created a number of striking and original pieces. Many photographs in the American Craft Council Library archive bear the credit "by Sam and Carol Kramer." A major joint exhibition "Joyas por Carol y Sam Kramer" was held at the Palacio de Bellas Artes in Havana, Cuba in the late 1950s. Over the years, Sam would credit much of his success to Carol, who continued to operate The Studio for eight years after his death in 1964.

Carol Kramer, one of the originals, died in New York City on January 30, 1986.
—Mark Foley

A Portable Photographic Studio

by Dennis French

The successful documentation of finished work is of vital concern to every artist. Excellent slides make better teaching tools, and it goes without saying that the quality of photographs weighs heavily when work is being considered for juried exhibitions. I feel that it is necessary for those of us who teach to impress upon our students the importance of professional quality in slide documentation. Towards this end the metals area at Illinois State University has designed and constructed a portable photographic studio for small- to medium-sized objects.

Space is a problem for us, as I'm sure it is in most other studios, so a unit was designed to be folded up when not in use. The table itself was constructed out of two pieces of ¾" particle board, 2′ × 4′. One 2′ × 4′ piece made up the table proper while the other piece was cut in half to make two 2′ × 2′ pieces. These became the "drop leaves." Our unit was built onto an out-of-service lapping table that was still very sturdy. Casters were added for added portability. The two drop leaves were connected with continuous hinges, and a single pivoting steel rod connected to the underside of each leaf provided the diagonal support needed to hold the leaves in position. The background paper support was constructed from 1" × 4" pine. It simply slides on and off the table. (See diagram.)

The lighting is achieved through the use of three light boxes, which provide a very even source of *diffused* light. The boxes rest one on each wing of the table while the third straddles the other two—providing a tunnel of light. (See diagram—frontal view.)

The boxes were constructed using foam-core board. The measurements can vary. Ours were 18" × 18" × 15" deep, with the sides tapering in towards the back. The boxes were lined with tin foil (use spray adhesive) and a ceramic socket was bolted into place. Vent holes were cut in the back, and a hinged flap was installed on top to give access for bulb replacement. The diffusion screens were milk white, ⅛" thick plexiglass, although smoked acetate could be substituted. For the light source we found that 250 watt Tungsten lamps (3200K) provide excellent illumination and perfect color balance when used with Ektachrome type B film. The finished boxes are very sturdy, but lightweight. As an added bonus, replace the 3200K Tungsten bulb with a standard 75 or 100 watt bulb, turn the box on its back and you have an excellent slide sorter that will hold 80 slides.

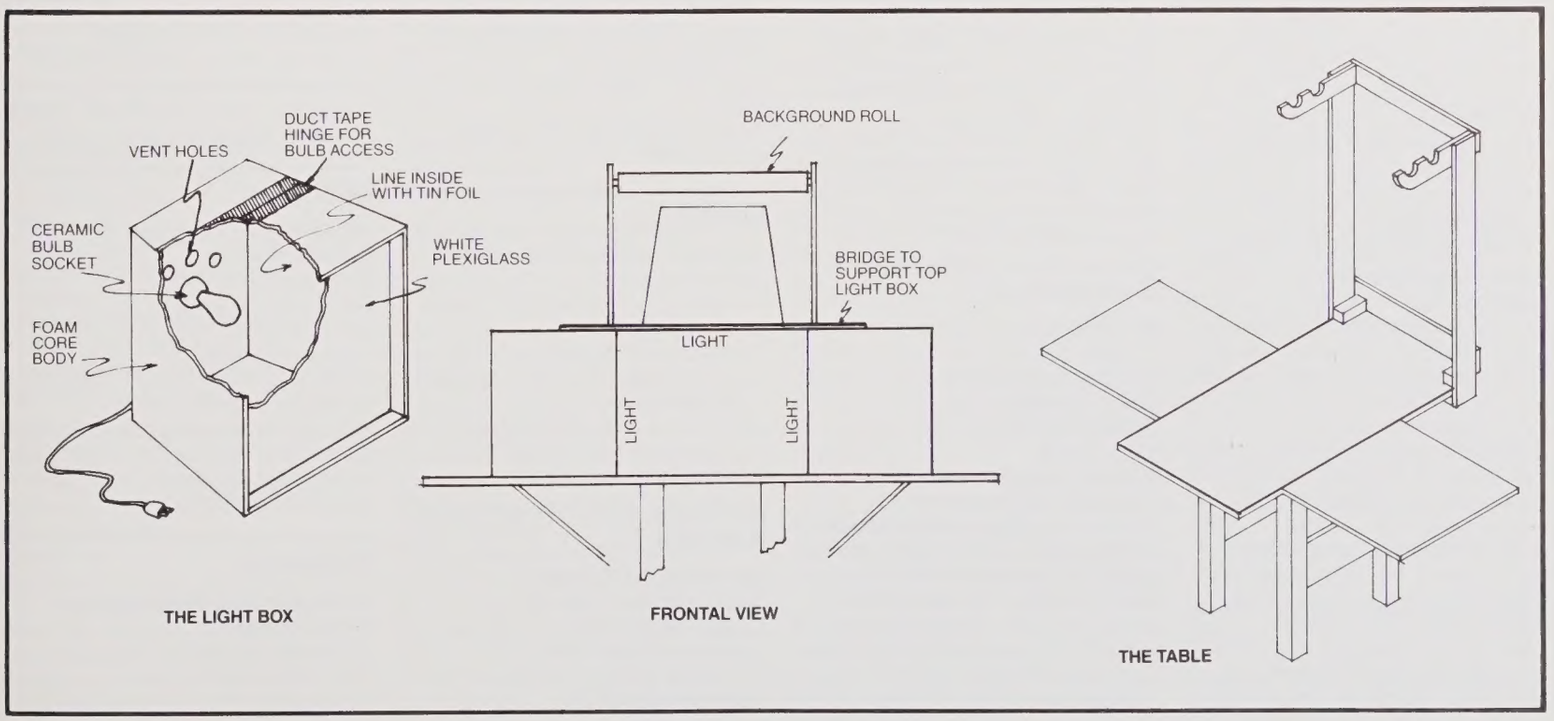
The boxes, when lit, provide a brightly and evenly illuminated area. The intensity can be adjusted in a number of ways: Moving the two side boxes further out on the wings will diminish the intensity. The top box will have to be supported by two rods long enough to span the distance between the two boxes. Also it will not always be necessary to have all three boxes illuminated. Often, a single side light can be quite effective, especially if a reflector card is used to bounce a little light back on the shadow side as "fill." Experiment with the set up to become familiar with different effects.

Seamless background paper can usually be found in rolls 53" and 96" long. We use primarily black and studio gray. The 53" rolls when cut in half with a hacksaw (or bandsaw) provide a 26½" wide backdrop, which is adequate for most work done in the metals studio. It is important to have at least 36" between the object you are photographing and the rear of the background paper. This distance effectively deepens and darkens the background and gives the photos a sense of depth.

A few hints for successful, professional photographs. First, a very good tripod is absolutely necessary. The extra cost here is well worth the results. Cheaper tripods are not rigid and at slower shutter speeds the action of the focal plane shutter can actually cause the cheap tripod to vibrate and render your photos blurry. Almost all my shooting is done at f stops f8 thru f16 or 22, in other words, the smaller apertures. This is *especially* important in close-up work such as rings and other small jewelry items. If the aperture is not "stopped down" when doing such work, the photos will be sharp only at one point. This is because of the effect known as "depth of field." Simply put, in close-up or macro photography, the smaller the f stop, the greater the depth of field. In regular photography the rule also applies but is not nearly as critical. The smaller apertures means that the film will be exposed to less light, so a slower shutter speed must be used, but with a good tripod very slow shutter speeds are no problem. Also, when doing close-up work made sure the background paper is spotless. If this means rolling down a new section, do it, because those spots, if close to the object being photographed, will be highly visible in the photo.

Finally, a trick I learned from a photographer friend—after setting up the lighting and placing the object, step back and squint your eyes. Now you see more truly what the camera is seeing and you can make more informed adjustments.

Dennis French is an assistant professor of art (metals) at Illinois State University/ Normal-Bloomington.



Metalsmith Summer Programs 1986

This is our sixth annual listing of summer workshops in metalsmith, jewelry and related fields. As we go to press, much of the information given here is tentative or to-be-scheduled. Therefore, do call or write for verification of themes, instructors and dates. Because enrollment is limited in many programs, we suggest you make reservations early.

Budget cutbacks have again this year prevented a number of institutions from presenting summer programs. However, the workshops and courses listed here offer a broad selection for those interested in pursuing studies in metalsmithing and jewelry over the summer.

Listing compiled by Kathleen McAloon

California

Gemological Institute of America
1660 Stewart Street
Santa Monica, CA 90404
(213) 829-2991
Summer Program: May 19–23, Jewelry Design (also July 14–18); June 5–6, Rhodium Plating; June 9–13 Repair; June 15–20, Hand Fabrication; June 30–July 11, Wax and Casting; July 28–August 8, Basic Faceting; August 11–September 5, Advanced Faceting; August 18–22, Basic Setting; August 25–29, Advanced Setting
Instructors: Charles Atmore, Richard Homer, Mark Miller, C. Thorntmann, Tanja Zupancich
Accommodations: Hotels and motels in area

Jewelry Tech Institute, Inc.
7271 Garden Grove Blvd.
Suite F
Garden Grove, CA 92641
(714) 895-3700
Marilyn Ravanal
Summer Program: Any of the following courses may be studied for one week starting any Monday on a space-available basis: Casting, Rubber Molding, Beginning Wax Techniques, Intermediate Wax Techniques, Advanced Wax Techniques, Beginning Jewelry Construction, Intermediate Jewelry Constuction, Advanced Jewelry Construction, Repair I, Repair II, Beginning Stone Setting, Advanced Stone Setting, Trade and Manufacturing Workshop (4 weeks)
Instructors: Professionals from the Jewelry Trade
Accommodations: Local motels

Revere Academy of Jewelry Arts
760 Market Street
Suite 939
San Francisco, CA 94102
(415) 391-4179
John Watson
Summer Program: Term runs from June 5 to August 25. Individual classes and workshops vary ranging from one day to seven weeks in duration: Casting, Design & Creativity, Diamond Grading, Engraving, Gem Identification, Goldsmithing (Basic & Intermediate), Gold Granulation, Jewelry Repair and Fabrication, Metalsmithing, Mokume Gane, Polishing Techniques, Production Tricks, Refining Precious Metals, Rendering, Rubber Mold Making, Selling Jewelry, Stone Setting (Basic, Intermediate, Pavé, Comprehensive), Wax Techniques, Advanced Goldsmithing, Advanced Metalsmithing—Anticlastic Raising, Advanced Pavé Setting, Avanced Rendering—Watercolors, Advanced Stone Setting—Channel Setting, Advanced Wax Techniques, Intermediate Engraving
Instructors: Keith Bartel, James Binnion, Paul Christensen, Evert DeGraeve, Ed Friedman, Michael Good, Adolpho Mattielo, George D. McLean, Carolyn Moniz, Dawn Nakanishi, Thomas Paradise, Matthew Parks, Kent Raible, Alan Revere, Yvette Rutledge, John Sliwa, Karen Sprague
Accommodations: Hotels, motels and residence halls in the downtown area

Colorado

Dunconor Workshops
Box 711
Saguache, CO 81149
(303) 655-2657
Harold O'Connor
Summer Program: Two week sessions, July–August: Shell constructions; Coloring titanium, niobium; Fabricating double-gold and forming bimetals; Creative use of drawplates; Designing artmetalwork; Tool making, coloring metals; Combining metals with nonmetal materials
Instructors: Harold O'Connor, David Didur, Randall Gunther, Travis Ogden, Scott Friedenburg
Accommodations: Motels, camping, shared housing

Connecticut

Brookfield Craft Center
P.O. Box 122
Brookfield, CT 06804
(203) 775-4526
(203) 853-6155
Karen Frank
Summer Program: June 28–August 24 day and evening classes: Introduction to Blacksmithing with Jeffrey Havill, Introduction to Jewelry Making with Heidi Wurlitzer. Weekend Workshops: June 28–29, Flat Chasing with John Cogswell; July 12–13, Champlevé Enameling with Joanne Conant; July 19–20, Forming with Shim: Ultrathin Sheet Metal with Susan Hamlet; August 2–3, Cloisonné on a Sphere with Florence Benzer
Accommodations: Overnight accommodations available with "Friends of BCC" for a modest fee; hotels and camping lists also available

Creative Arts Workshop
80 Audubon Street
New Haven, CT 06511
(203) 562-4927
Summer Program: June 23–July 31, Jewelry: Beginning/Intermediate (two evenings per week), Metal Sculpture (one evening per week)
Instructors: Ed Warner, Ann Lehman
Accommodations: Local hotels and motels

Georgia

University of Georgia Department of Art
UGA Studies Abroad
Visual Arts Building
Athens, GA 30602
(404) 542-7011
John D. Kehoe
Summer Program: June 13–August 22 in Cortona, Italy, including Art history, Book arts, Calligraphy, Drawing, Graphic design, Metalwork, Photography, Printmaking, Sculpture, Environmental Design, Italian Language and Journalism
Instructors: Metalwork—Gary Noffke
Accommodations: 15th-century monasteries

Illinois

Southern Illinois University School of Art
Carbondale, IL 62901
(618) 453-4315
Dr. Patricia Covington
Summer Program: July 7–August 1, Metalsmithing
Instructors: To be announced
Accommodations: Campus housing

Kansas

University of Kansas
Metalsmithing & Jewelry Design Department
Lawrence, KS 66045
(913) 864-3074
Gary Nemchock
Summer Program: June 1–June 30, Metalsmithing, Beginning Jewelry, Avanced Fabrication
Instructor: John Havener
Accommodations: Dorms

Maine

Haystack Mountain School of Crafts
Deer Island, ME 04627
(207) 348-6946
Jacqueline Michaud
Summer Program: Beginning, intermediate and advanced level classes in metals, blacksmithing and jewlery
Accommodations: Double, triples and dormitory rooms on campus

Portland School of Art
97 Spring Street
Portland, ME 04101
(207) 775-3052
Connie Hayes
Summer Program: Mid-June–End July, Jewlery and Silversmithing
Instructors: To be announced
Accommodations: Dorms, hotels, motels

Massachusetts

School of the Museum of Fine Arts
230 The Fenway
Boston, MA 02115
(617) 267-1219
Donald B. Grey
Summer Program: June 30–August 9, Metals, Silversmithing and Jewelrymaking
Instructor: David Austin
Accommodations: Hotels in town

Michigan

University of Michigan School of Art
2000 Bonsteel Blvd.
Ann Arbor, MI 48109
(313) 764-0397
Hiroko Pijanowski
Summer Program: July 2–July 16, Jewelry: Content/Context
Instructor: Onno Boekhoudt (Gerrit Rietveld Academic in Amsterdam, Holland)
Accommodations: Dorms

Montana

Montana State University School of Art
Bozeman, MT 59717
(406) 994-2952
Richard Helzer

Summer Program: June 23–August 22, Beginning, Advanced and Independent Study in Metalsmithing
Instructor: Richard Helzer
Accommodations: University housing

New Hampshire

League of New Hampshire Craftsman
205 N. Main Street
Concord, NH 03301
(603) 224-3375
Lee Schuette
Summer Programs: June–August, Many courses available at several different locations. Call for further information.

New Jersey

Peters Valley
Layton, NJ 07851
(201) 948-5200
Matt Povse
Summer Program: July 4–6, Jewelry Design Rendering with Pat Frank Modzeleski; July 9, The Professional Goldsmith with Roger Thompson; July 12–15, Enameling with Natalie Paul; July 18–20, Setting Faceted Stones with John Cogswell; August 23–24, Electroforming and Electroplating with Rich Marshall and Bob Browning; August 27–29, Metalmania—Production Methods and Techniques with Holly Staults
Accommodations: Limited student housing available

School of Art and Cultural Center in the Old Church
561 Piermont Road
Demarest, NJ 07627
(201) 767-7160
Karen Shalom
Summer Program: Eight weeks starting June 9, Jewelry and Sculpture courses
Instructors: Ira Chapler, Nina Anderson, Irene Plunkty-Goedecke
Accommodations: Hotels and motels in area

New York

Chautauqua Institution
Chautauqua, NY 14722
(716) 357-4411
Judy Bush
Summer Program: June 30–August 22, Art Metals and Jewelry
Instructors: Barbara Minor, Chris Hentz; visiting artists: Harold Helwig, Carol Kumata
Accommodations: Resident halls

Craft Student League of the YWCA
610 Lexington Avenue
New York, NY 10022
(212) 735-9732
Janet Katz
Summer Program: May 22–June 12, Enameling with Norma Zotos; May 20–June 10, Married Metals Techniques for Beads and Other Forms with Tamiko Ferguson; May 22–June 12, Silversmithing

Arrowmount School of Arts and Crafts, Gatlinburg, TN

Techniques for Jewelry with Phebe Allen Blake; May 21–June 11, Basic Jewelry with Nili Baider
Accommodations: Hotels in town

Fashion Institute of Technology
Division of Continuing Education
227 West 27 Street
New York, NY 10001
(212) 760-7650
Summer Program: Many courses will be offered, exact dates and classes to be decided. Call for further information

Kulicke-Stark Academy of Jewelry Art
2231 Broadway
New York, NY 10024
(212) 362-8633
Margot Bachmann
Summer Program: July 7–11, July 14–18, July 21–25; Classical Jewelry Making, Cloisonné Enameling, Silversmithing, Chain Making, Stone Cutting and Setting, Granulation
Instructors: Bessie Jamieson, Louise Parrish, Sarah Amos, Kerstin Nichols
Accommodations: Motels in town

92nd Street Y Jewelry Dept.
1395 Lexington Avenue
New York, NY 10128
(212) 427-6000 x162
John Cogswell
Summer Program: June 9–12, Anodizing with David Tisdale; Inventive Enameling Techniques with Rebekah Laskin; June 16–18, Experimenting with Color in Metal with Enid Kaplan; June 23–26, Imagery on Metal with Pam Lins, Documenting Your Work—Photo Techniques for Studio Craftsman with Charles Lewton-Brain; June 30–July 3, Jewelry Rendering with Lee Roeder; July 14–17, Enamels in Jewelry—A Fresh Approach with Lisa Gralnick; June 12–July 17, six weekly sessions in Jewelry Making with Mary Beth Rozkewicz
Accommodations: Hotels in town

Parsons School of Design
66 Fifth Avenue
New York, NY 10012
(212) 741-8668
Carol Williams
Summer Program: June 9–July 18—most workshops are one- or two-weeks long: Metalworking
Instructors: Deborah Aguado, Sydney Scherr, Peter Mroczkowski, Michael Lieber, Richard Palermo, Jamie Pelissier
Accommodations: Not provided by school but housing office will furnish information

Rochester Institute of Technology
Summer School
One Lomb Memorial Drive
Rochester, NY 14623
(716) 475-2062
Irene Hawryschuk
Summer Program: June 2–August 15, Workshops in Metals
Instructors: To be announced
Accommodations: Dorms and hotels in area

Sculpture Center Studios
167 East 69 Street
New York, NY 10021
(212) 737-9870
G.L. Sussman
Summer Program: June–August, Bronze Casting, Experimental and Technical Metalworking
Instructors: John Rackham, Steve Burns
Accommodations: Hotels in area

Studio Jewelers, Ltd.
32 East 31 Street
New York, NY 10016
(212) 686-1944
Robert Streppone
Summer Program: June 16–August 2, Beginning and Advanced Jewelrymaking, Enameling, Stonesetting, Bead and Pearl Stringing, Wax modeling—Casting, Jewelry Repair
Instructors: Robert Streppone, Patience Morgan, Joseph Daboosh, Hiroko Miyachi
Accommodations: Hotels and Ys in the area

Summer Six
Skidmore Art Program
Saratoga Springs, NY 12866
(518) 584-5000 x2372
Holly Schwarz
Summer Program: May 20–June 27 and July 1–August 8, Intensive workshops in enameling
Instructor: Jamie Bennett
Accommodations: Campus housing

Westchester Art Workshop
County Center Building
White Plains, NY 10607
(914) 683-3986
Summer Program: Session I: May 27–June 27, Session II: June 30–August 8, Various Courses in Jewelrymaking
Accommodations: Hotels and motels in area

North Carolina

Haywood Technical College
Clyde, NC 28721
Arch Gregory
(704) 627-2821
Summer Program: Exact courses and dates yet to be decided. Call for further information

John C. Campbell Folk School
Brasstown, NC 28902
(704) 837-2775
Tom DeTitta
Summer Program: June 15–21, Damascus Steel with Glen Gilmore: July 6–19, Blacksmithing with Nol Putnam; July 27–August 2, Blacksmithing with Fred Caylor; August 3–10, Blacksmithing with Walt Schadden
Accommodations: Dorms

Penland School of Crafts
Penland, NC 28765
(704) 765-2359
Don Evans, Registrar
Summer Program: June 2–6, Blacksmithing with Ira DeKoven, Metals with Mary Ann Scherr; June 9–20, Sculpture with Alex Giampietro, Metals with Mary Ann Scherr; June 23–July 4, Blacksmithing with David Brewin, Enameling with Bill Helwig, Metals with Jim Malenda; July 7–24, Sculpture with John Ploof, Metals with Carol Kumata; July 28–August 14, Metals with Mac McCall; August 18–29, Metals with Arline Fisch; September 1–12, enameling with Rebekah Laskin, Metals with Don Friedlich; September 15–19, Sculpture with Don Drumm, Metals with Jan Loyd
Accommodations: On-grounds room and board

Ohio

American Society for Metals
Metals Park, OH 44073

(216) 338-5151
Rodney W. Allwood
Summer Program: June 2–6 and August 4–8, Metalgraphic Technique; June 10–13 and July 29–August 1, Metallurgy for the Non-Metalist; June 16–20, Heat Treatment of Steel with Richard Sisson Jr.; June 16–20, Mechanical Testing of Metal with Thad Elsesser; June 23–27, Elements of Metallurgy with Robert Snyder; July 14–18, Principles of Heat Treating with George Krauss; July 21–August 1, Principles of Machinery with Robert Shumway; August 11–15, Metalgraphic Interpretation with George VanderVoort; August 11–15, Practical Heat Treating with Howard Boyer and Joe Devis
Accommodations: Local motels

Blossom Festival School of Art
211 New Art Building
Kent State University
Kent, OH 44242
(216) 672-2191
Brinsley Tyrell
Summer Program: June 16–July 11, "The New American Jewelry": a study of the most exciting recent developments in American jewelry, including fashion, production and body jewelry
Instructors: Bruce Metcalf, Robert Lee Morris and Marjorie Schick
Accommodations: Dorm rooms available

Miami University
Craft Summer
Rowan Hall
Oxford, OH 45056
(513) 529-6121
Susan Ewing
Summer Program: June 9–July 18, Enameling, Gold Overlay, Blacksmithing, Electroforming and Anodizing
Instructors: Harold Helwig, Komelia Okim, Joe Bonifas, Pat Nelson
Accommodations: Dorms

Oregon

Oregon School of Arts and Crafts
8245 SW Barnes Road
Portland, OR 97225
(503) 297-5544
Valorie Hadley
Summer Program: June 30–July 5, Small-scale Fabricated Metal Sculpture with Martha Glowacki; July 7–11, Lost-Wax Technique with George McClean; August 18–22, Nunome-Zogan with Hiroko Pijanowski
Accommodations: Hotels in town

Pennsylvania

Philadelphia College of Art
PO Box 53205
Philadelphia, PA 19105
(215) 875-2221
Sharon Church
Summer Program: Summer courses will be offered, but the information is not available yet. Call for further information

Arrowmount School of Arts and Crafts, Gatlinburg, TN

Touchstone Center for Crafts
P.O. Box 2141 M
Uniontown, PA 15401
(412) 438-2811
Eleanor Molnar
Summer Program: Resident crafts school in the mountains south of Pittsburgh, PA. June 23–28, Color in Metals with Enid Kaplan; July 18–20, Forming Using Metal Characteristics with Charles Lew-Tonerain; July 21–26, Enameling on Copper with Styrofoam with Ed Inks; Children's and other classes offered.
Accommodations: available

Tyler School of Art
Crafts Department
Beech and Penrose Streets
Philadelphia, PA 19126
(215) 224-7575
Stanley Lechtzin
Summer Program: May 12–May 23, May 26–June 7, June 3–July 11: Fashion Jewelry, Pewter, Toolmaking
Instructors: Daniella Kerner, Vickie Sedman, Paul Murray
Accommodations: Hotels and motels in town

Rhode Island

The Jewelry Institute
40 Sims Avenue
Providence, RI 02909
(401) 351-0700
Richard Edgerton
Summer Program: 5 days in July—exact dates to be determined: Basic Jewelry Skills, Stone and Diamond Setting, Lost-Wax Casting, Modelmaking, Assaying, White Metal Moldmaking, Electroplating, Hard Soldering, Hand Engraving
Instructors: To be announced
Accommodations: Special student rates at nearby Holiday Inn

Rhode Island School of Design
2 College Street
Providence, RI 02903
(401) 331-3511
Kelly Zanghi
Summer Program: June 25–August 1, Metalcasting with Tony Ascriezi; other courses to be announced
Accommodations: On-campus

Tennessee

Appalachian Center for Crafts
Box 347 A-1 Route 3
Smithville, TN 37166
(615) 597-6801
Robert Coogan
Summer Program: June 30–July 4, Faceted Stone Settings with Carol Hagen, Beginning Blacksmithing with Fred Caylor; July 7–11, Knifemaking with Sid Birt, Intermediate Blacksmithing with Fred Caylor; July 14–18, Anticlastic Raising with Nancy Linkin, Damascus with Sid Birt; July 21–25, Die-Forming Aluminum with Anne Graham, Advanced Pattern Development in Damacus with Daryl Meier; July 28–August 1, Anodizing Aluminum with Anne Graham, Blacksmithing with Glen Gilmore; August 4–8, Engraving and Gun Embellishment with Bruce LePage, Blacksmithing with Glen Gilmore
Accommodations: Dorm housing, some camping

Arrowmont School of Arts and Crafts
PO Box 567
Gatlinburg, TN 37738
(615) 436-5860
Debbie Johnson
Summer Program: June 9–13, Holloware for beginning to advanced students with Helen Shirk; June 23–27, Anodizing Aluminum for jewelry for beginning to advanced students with David Tisdale; June 30–July 11, Jewelry and/or Dimensional Objects with Elliott Pujol; July 21–August 1, Enameling for beginning to advanced students by Ed Deren; July 21–August 1, Three-Dimensional Techniques for the artist/jeweler by Richard Helzer; August 4–8, Enameling by Bill Helwig; August 4–8, Cold Connections in Jewelry with David LaPlantz; August 11–15, Blacksmithing—The Tool as Object with Glen Gardner; August 11–15, Weathervanes with Glen Gardner
Accommodations: Cottage and dorm-type accommodations

Washington

University of Washington
Summer Quarter Office
103 Lewis Hall DW-40
Seattle, WA 98195
(206) 543-0970
Betty Anderson
Summer Program: June 23–August 22, Art 258 Jewelry Design with John Marshall (Note: this credit course has prerequisites)
Accommodations: Dorms

West Virginia

Cedar Lakes Crafts Center
Ripley, WV 25271
(304) 372-6263
Summer Program: Call for information

Wisconsin

University of Wisconsin-Madison
Art Department
Humanities Building
Madison, WI 53706
(608) 262-1660
Summer Program: June 16–August 8, Beginning and Advanced Metalworking
Instructors: To be announced
Accommodations: Dorms available

University of Wisconsin-Whitewater
800 W. Main Street
Whitewater, WI 53190
(414) 642-7191
Linda Threadgill
Summer Program: June 15–20, Etching for Jewelry and Small Sculpture
Instructor: Linda Threadgill
Accommodations: Dorms

Canada

Georgia Brown College of Applied Arts/Technology
PO Box 1015, Station B
Toronto, Ontario M5T 2T9
Joseph Rugole
Summer Program: July 7–18, Introduction to Jewelry
Instructor: Anne Grotrian
Accommodations: In-town

Harbourfront Craft Studio
417 Queen's Quay West
Suite 500
Toronto, Ontario M5V 1A2
(416) 869-8447
Jean Johnson
Summer Program: Various courses in Basic Metalworking. Exact dates and classes to be decided. Call for further information

Nova Scotia College of Art and Design
5163 Duke Street
Halifax, Nova Scotia B3J 3J6
(902) 422-7381
Scott MacDougall
Summer Program: May 12–June 30, Introduction to Jewelry with Martha Glenny; July 2–August 19, Jewelry Workshop with Charles Lewton-Brain
Accommodations: Hotels in area

SNAG

Slide Rental Service

Slide sets are currently available for sale and rental to SNAG members, covering a wide range of metalsmithing topics: *Anodized Aluminum* by Arline Fisch, *Spray Etching* by Linda Threadgill, *Jewelry Rendering Step by Step* by Sharon Church, *The Making of Wine Cooler, Wine Bottle and Ice Cubes for Feast Bracelet* by Richard Mawdsley and slides of Distinguished Members work. Rentals range from five to fifteen dollars per set. For an up to date listing and further information contact:

Annette Mahler
SNAG Slide Library
School of Art—DM 10
University of Washington
Seattle, Washington 98195

Metalsmith
In the next issue

Metalwork in Peru

Laurie Hall

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Beyond the Bench

and more

SUMMER ARTS

METAL FORMING WORKSHOP – June 23–July 18
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- *Alma Eikerman, Professor Emeritus*–guest lecturer
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ART / CULTURE / FUTURE will address significant issues now of concern to all who are involved with crafts: craftspersons, designers, artists, educators, arts administrators, critics, collectors, architects, and representatives of museums and galleries. Within the broad scope of the conference, the present state of crafts in America will be re-examined in a cultural context. The interdisciplinary conference will provide perspectives on the future and support to those committed to the viability of crafts and decorative arts in an ever-changing society.

Sponsored by the **American Craft Council** and hosted by **The Oakland Museum**, with additional events at **Laney College**, **California College of Arts and Crafts**, and the **Henry J. Kaiser Convention Center**, in the heart of the San Francisco Bay Area.

ISSUES

Distinguished panelists and speakers will discuss new aesthetic directions in the crafts, the craft marketplace created by the galleries, the motivations of collectors, the status of the history and criticism of the crafts, the role of the crafts in architecture, the development of the contemporary craft artist and his/her place in society, the crafts in education, and the role of museums in fostering the crafts. American craft artists and institutions currently function along a broad spectrum from the fine arts to industrial design, and ART/CULTURE/FUTURE will examine this spectrum as a subtheme in all panel discussions.

KEYNOTE SPEAKER

Spiro Kostof, Professor of Architectural History, University of California, Berkeley; author, *A History of Architecture: Settings and Rituals*; host, forthcoming PBS series, "America by Design"

HIGHLIGHT SPEAKERS

Richard Andrews, Director, Visual Arts Program, National Endowment for the Arts
Elliot Eisner, Professor of Education and Art, Stanford University
Jack Lenor Larsen, President, American Craft Council; Design Director, Jack Lenor Larsen, Inc.
Stephen de Staebler, ceramic sculptor

OTHER PROGRAM PARTICIPANTS

Louise Allrich, Robert Arneson, Kenneth Baker, Graham Beal, Judith Bettelheim, Ruth Braunstein, Wendell Castle, Garth Clark, Colette a.k.a. Justine, William Daley, Arline Fisch, Alice Cooney Frelinghuysen, David Gebhard, Barbara Goldstein, Lloyd Herman, Neil Hoffman, Henry Hopkins, Leonard Hunter, Robert Jensen, Matthew Kangas, Wendy Kaplan, Joyce Kozloff, Gyöngy Laky, Modesto Lanzone, Marge Levy, Andrew Lewis, Marvin Lipofsky, Jan Brooks Loyd, Marcia Manhart, Joseph Monsen, Albert Paley, John Perreault, Joanne Rapp, Howard Risatti, Peter Selz, Barbara Shawcroft, Rose Slivka, Paul Smith, Holly Solomon, Allan Temko, Kenneth Trapp, Christopher Wilk and OTHERS TO BE ANNOUNCED.

FORUM

Presentations on new ideas, scholarship, technical breakthroughs, and movements or trends in the crafts and decorative arts will be delivered by selected individuals.

DEMONSTRATIONS

Artists will include David LaPlantz, metal; Marvin Lipofsky, glass; Wendy Maruyama, wood; Nance O'Banion, fiber; June Schwarcz, enamel; and Richard Shaw, clay.

EXHIBITIONS, RECEPTIONS, FILMS, AND MORE

PRE- AND POST-CONFERENCE EVENTS

Open Studios. June 4 and June 8. Participating artists include Bruce Beasley, Garry Knox Bennett, Stephen and Michael Bondi, Lia Cook, Donald Farnsworth, Viola Frey, Ina Kozel, John Lewis, John Roloff, and Peter Voulkos.

Meetings. Rooms for special meetings and networking can be arranged on a space-available basis. Contact the ACC Conference Office, P. O. Box 30756, Oakland, CA 94604.

Conference Travel Discounts. Call Bottom Line Travel, exclusive travel agent for ART/CULTURE/FUTURE. 800-457-9833 (in California, 800-621-5638).

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Late pre-registration by mail, April 15–May 15, 1986, $20.00 late fee. After May 15, register in person at the conference for a $30.00 late fee. Registration fees include all sessions and scheduled conference activities; they do not include meals, lodging, or entertainment. Refunds will be sent upon receipt of written cancellation notice prior to May 28, 1986. A $25.00 cancellation fee will be deducted.

Pre-registration fee, American Craft Council member ☐ New ☐ Continuing	$120	$_____
Pre-registration fee, non-member	180	_____
ACC Membership (special conference rate)	30	_____
Late fee if postmarked between April 15, 1986 and May 15, 1986	20	_____
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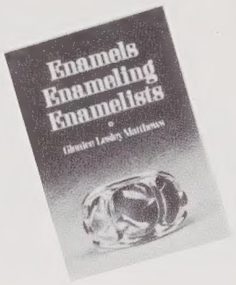

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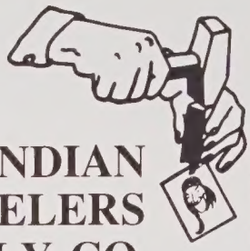

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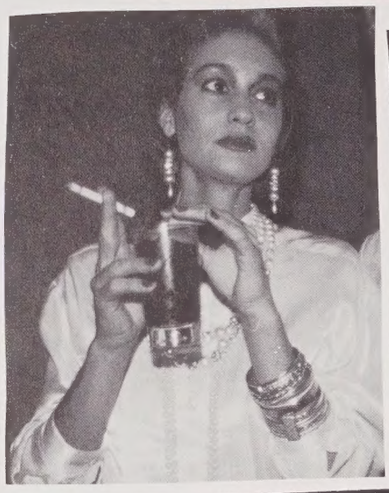

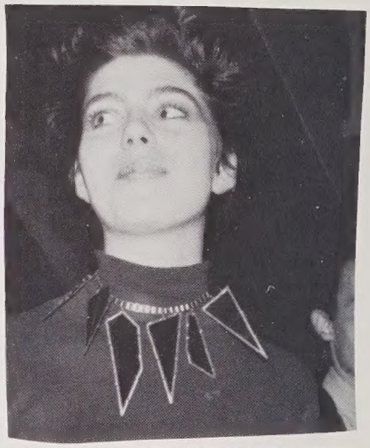

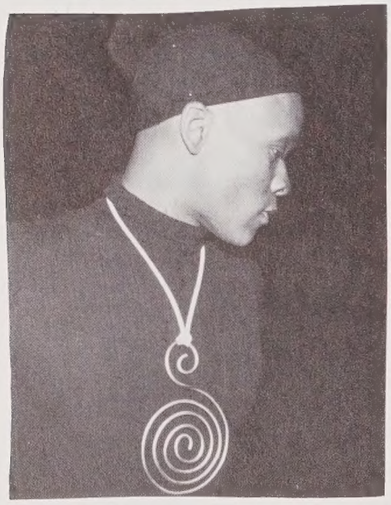

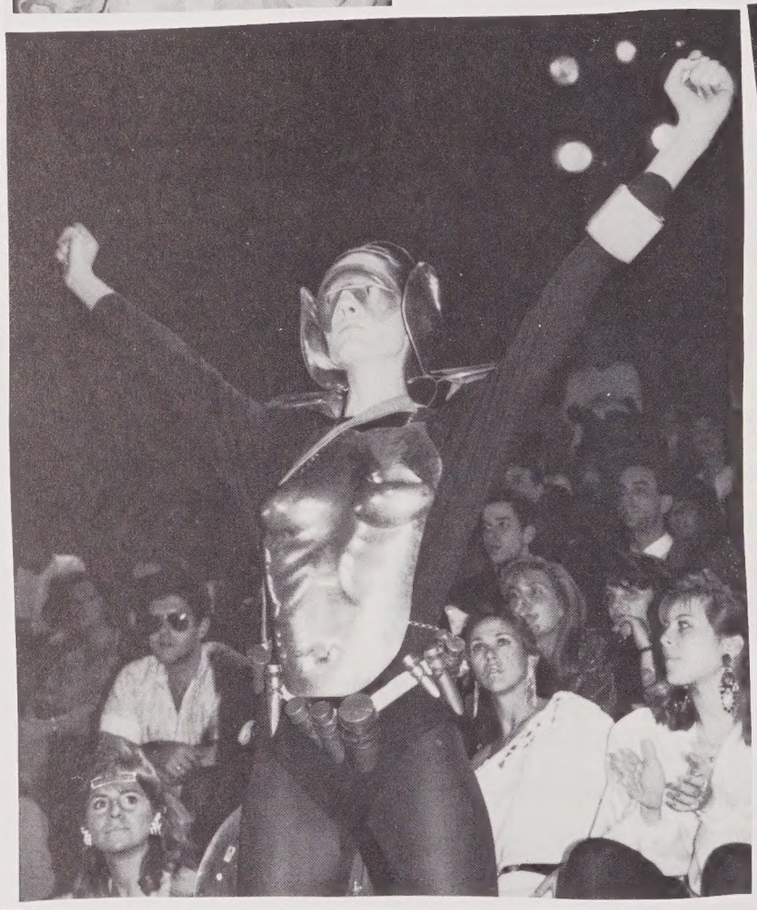

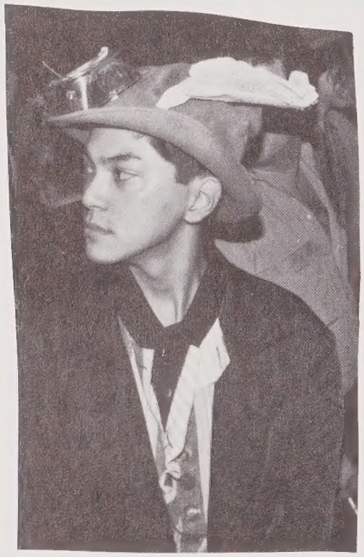

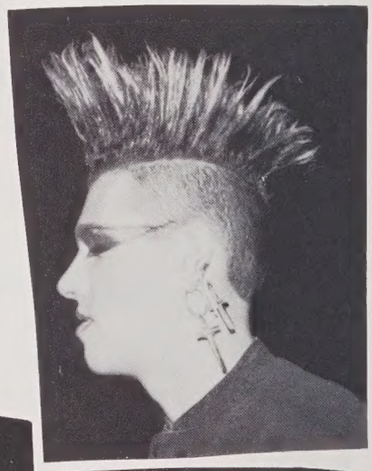

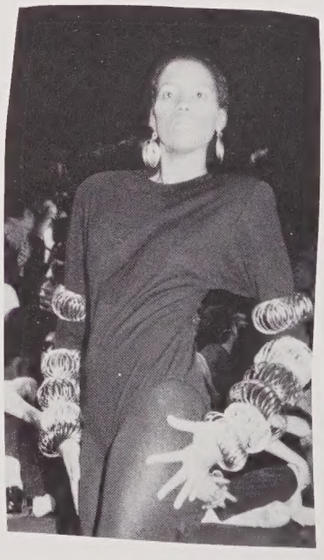

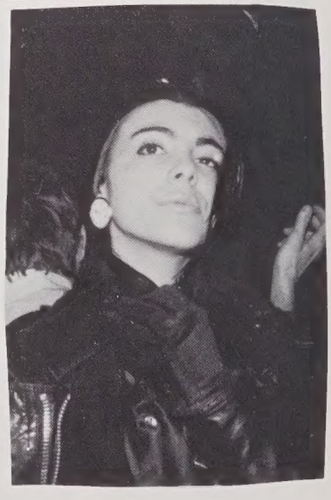

Photos: Sachiko Uozumi

MEMBERSHIP

SOCIETY OF NORTH AMERICAN GOLDSMITHS

The Society of North American Goldsmiths (SNAG) was formed in 1970 to promote contemporary gold- and silversmithing. SNAG serves as a forum for the free exchange of ideas in the field.

Technical information, esthetic and educational issues, and other topics of interest to the practitioner and teacher of contemporary metalwork are disseminated by SNAG publications and conferences. Professionals and students, collectors, gallery owners and enthusiasts will all find SNAG interesting and useful. From pure sculpture to production jewelry, SNAG offers information on the entire range of the exciting field of metalsmithing.

Services

Each year, SNAG conducts a conference that attracts jewelers and silversmiths from all over the world. Major figures in the field speak on a multitude of topics. Each conference is held in a different location to allow the widest audience possible access to these lively and stimulating gatherings.

Periodically, SNAG sponsors major exhibitions of contemporary metalwork. In the past, SNAG shows have been mounted at the Renwick Gallery, the St. Paul Museum of Art and the Phoenix Museum of Art. A special exhibition of work by Distinguished Members traveled to major museums in Europe in 1979.

The Society operates a book ordering service, through which important texts on all aspects of the field can be ordered at a reduced price.

SNAG also operates a slide library and rental service, which contains the portfolios of Distinguished Members and other notable metalsmiths. Members can rent or purchase slides at minimal cost.

Publications

Metalsmith is the only magazine in America devoted solely to the metal arts. Prominent jewelers and designers, silversmiths, blacksmiths and sculptors are featured in full-length articles. Process and technique are explored in essays on design and production, materials and equipment. Regular columns by leading authorities discuss the latest gallery shows, newest books and current museum exhibitions.

The Newsletter is published bimonthly and is available to members only. It features timely information on exhibitions, workshops, conferences and job opportunities from all across the U.S. and Canada.

Membership

SNAG offers several types of memberships, each tailored to a specific level of involvement in the field of contemporary metalsmithing.

General Membership is open to everyone and includes subscriptions to *Metalsmith* and the SNAG Newsletter, reduced conference fees, access to all of SNAG's services and full voting privileges.

Distinguished Membership is a special juried category, which is conferred upon members who demonstrate outstanding contribution to the field. Special exhibitions and other privileges are available to these members. This category of membership includes all publications and other advantages described above.

Student Membership is offered at a reduced rate to anyone attending an accredited educational institution. This membership offers all the advantages of a *general membership* but does not carry voting privileges.

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The Quarterly Magazine Devoted to the Development and Appreciation of the Metal Arts

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Historical articles trace the roots and development of metalwork in the styles and artists of the past.

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An inside look at the precious and nonprecious materials and the unique methods of metalsmithing and jewelry.

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Each issue will seek out and explore significant new work in the fields of jewelry, enameling, holloware, blacksmithing and sculpture.

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Curators of well-known museums and collections from around the world examine important works, commenting on their technical, historical and esthetic significance.

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Each issue selects the most important shows for review. The emphasis is on a visual presentation of the major pieces and a critical appraisal of their contribution to the contemporary body of work being created in the field.

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- Where to find summer workshops and programs in metal
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INNOVATIONS In Jewelry Making

Here are just a few of the new products that will be featured in Rio Grande's new tool catalog. Coming this December.

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Dome sheet metal with quiet ease and efficiency - *at production capacity!*

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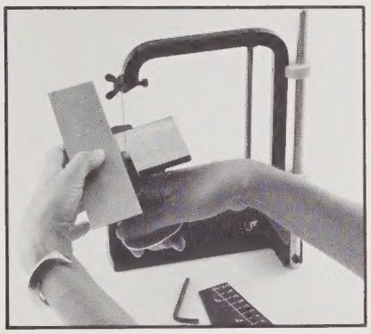
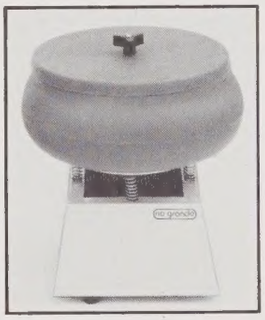


With this saw you can make dies that allow you to reproduce identical shapes out of sheet metal without sawing.



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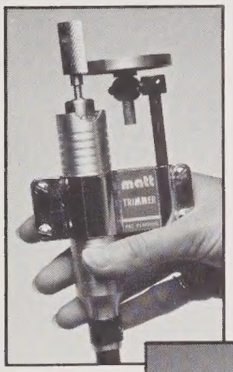

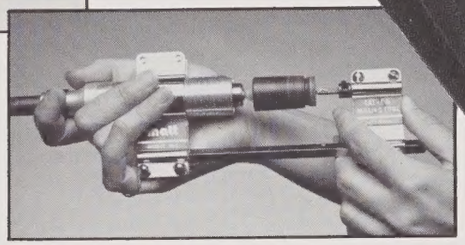

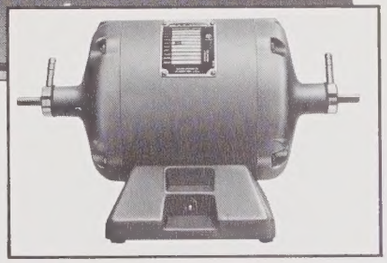

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